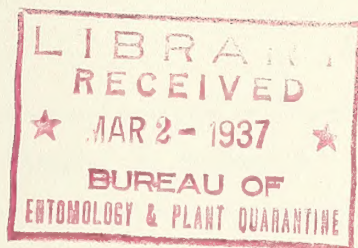


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INSECT PEST SURVEY BULLETIN

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INSECT NOTES FROM COSTA RICA IN 1936

C. H. Ballou

Chief of Entomological Section

National Agricultural School

San Pedro de Montes de Oca

This paper is a continuation of the supplements being published each year in the Insect Pest Survey Bulletin on the collection records made by C. H. Ballou. The previous publications are Supplements to No. 4, Vol. 15, 1935, and Supplement to No. 9, Vol. 15, 1936. The present paper does not include the entire collection records for the year, but only those giving additional data to the preceding lists. The plants are those from which the insects were collected and do not in all instances indicate the food plants. If the insect was feeding, the plant name is followed by "f" and if it was destroying the plant or ruining the crop, by "F".

Although a few localities new to the lists have been added, it is not thought practicable to reissue the map this year.

COLEOPTERA

Insect and locality	Collected on	Date and notes
ANTHICIDAE		
Notoxus eximius Champ. Paso Ancho	Cestrum lanatum Cestrum macrophyllum Coix mayuen Ficus carica	Linum usitatissimum Tournefortia foetidissima. Trichilia havanensis Watsonia sp.
BRENTHIDAE		
Brentus mexicanus Boh. Paso Ancho Rancho Redondo Waldeck	Cestrum nocturnum Citharexylum caudatum Elaphrium sinaruba	Impatiens balsamina Pennisetum clandestinum "Tora blanca"
BUPRESTIDAE		
Agrilus furcillatus Chevr. Santa Ana	Buddleia sp.	July
Brachys anthrenoides Wtrh. Paso Ancho	Inga roussoviana	April
Chrysobothris costaricana Obenberger San Pedro	Coffea arabica	December
Chrysobothris convexiusculatus Wtrh. San Rafael de Coronado	Rosa sp.	March
Liopleura nodiery Thery Paso Ancho San Pedro	Cucurbita pepo Eugenia jambos Ficus sp.	September to December
Lius hoscheki Obenberger San Pedro	Vernonia brachiata	April

Insect and locality	C o l l e c t e d o n	Date and notes
Pachyschelus pittieri Fisch. Paso Ancho	Inga roussoviaana	March, June, November
CANTHARIDAE		
Belotus abdominalis (Iec.) San Pedro	Persea americana	June
Chauliognathus histrio (Dej.)	Acnistus arborescens Citrus limonia	May, June
Chauliognathus oedemeroides Gorh. Paso Ancho San Pedro	Asparagus officinalis Dombeya wallichii Inga roussoviaana	October to December
Diaphron proteum Gorh.	Citrus limonia Cucurbita pepo Coffea arabica Diphysa robinoides Euphorbia hoffmanniana	July
Discodon plicatum Gorh.	Persea americana Eriobotrya japonica	June, December
CARABIDAE		
Calleida chryseis Bates Paso Ancho San Pedro Tarrazu	Acnistus arborescens Cornutia pyramidata Malpighia glabra Persea americana	May, June, August
Euproctus metricus Bates San Pedro	Persea americana	October
Lebia charilla Bates San Pedro	Persea americana	June

Insect and locality	C o l l e c t e d o n	Date and notes
Leptotrachelus puncticollis Bates San Isidro del General	Zea Mays	June
CERAMBYCIDAE		
Adesmus druryi Thoms. Paso Ancho San Pedro	Acnistus arborescens	October, December
Adesmus spectabilis Bates Paso Ancho	Acnistus arborescens Eriobotrya japonica	September
Adetus muticus Thomson San Pedro	Spondias purpurea	May
Antodice cretata Bates	Persea americana	June
Compsa textilis Thoms. San Pedro	Chayota edulis	July
Dorcasta geometrica Bates San Pedro	Ipomoea tiliacea	June
Erana leuconoe Bates San Pedro	Erythrina rubrinervia	June
Eucharassus dispar Bates Guadalupe	Inga tonduzii	January
Evander unicolor Bates Santa Elena de Tarrazu	Coix mayuen Inga roussoviana	May, July, November
Hippopsis lemniscata (F.) Paso Ancho	Vernonia brachiata	

Insect and locality	C o l l e c t e d o n	Date and notes
Neoclytus cacticus (Chevr.) Waldeck	Theobroma cacao	April
Nyssodrysina haldemani (Iec.) Waldeck	Theobroma cacao	April
Ochresthes pollinosus (Chevr.) Paso Ancho	Cosmos sulphureus	November. Abundant in flower.
Oncideres trinodatus Osy. Tarrazu	Coffea arabica	September
Ozineus arietinus Bates Waldeck	Theobroma cacao	April, July
Pterichthya longicauda Bates	Chayota edulis	November, July, September
Pyrodes rhomboderus (Bates) San Isidro del General	Blighia sapida	September June
Trachyderes succinctus L. Paso Ancho	Bidens pilosa	March, November
San Isidro del General	Lycopersicum esculentum	
CHRYSOMELIDAE		
Allochroma coccineum Clark? Waldeck	Theobroma cacao	July
Allochroma sexmaculatum Clark Paso Ancho	Caladium bicolor Colocasia esculenta	May. Injurious
	f	f
	f	f
	Xanthosoma helleborii- folium	f
	Xanthosoma sagitti- folium	f

Insect and locality	C o l l e c t e d o n	Date and notes
Altica jamaicensis Oliv. San Isidro del General San Pedro	Byrsonima crassifolia Citrus sinensis Jussiaea decurrens f Jussiaea suffruticosa f	May to September f
Anomoea sanguinipennis Lacord. San Pedro	Lippia berlandieri Rosa sp.	f May. Eating pollen on Zea mays.
Asphaera abdominalis (Chevr.) Paso Ancho	Buddleia davidi Vernonia brachiata	April, December f f
Asphaera nobilitata (F.) Paso Ancho	Chrysophyllum cainito Coix mayuen Elaeis guineensis	April, November Urera baccifera Vernonia brachiata
Calligrapha elegantula Jacoby Paso Ancho Rancho Redondo	Chayota edulis Curcubita pepo Ipomoea purga Ipomoea tiliacea	May, July f f
Calligrapha fulvipes Stål San Pedro Waldeck	Commelina sp.	April, July Sida rhombifolia Vitis tiliaceaefolia
Carinispa nevermanni Urmann Paso Ancho	Bunchosia costaricensis f	January, August f
Cerotoma rogersi Jacoby San Isidro del General Ujarras	Hamelia erecta Hibiscus sabdariffa f Musa sapientum Panicum barbinode Pennisetum purpureum	Phaseolus helvolus Solanum tuberosum Vitis vinifera Vitis tiliaceaefolia
Cerotoma ruficornis (Oliv.) San Pedro	Phaseolus vulgaris Zea Mays	May, December

Insect and locality	C o l l e c t e d o n		Date and notes
Chalcophana mutabilis Harold. San Pedro Guadalupe	Pahlia sp. (local name Catalina) Solanum torvum		
Chalepus clypeatus Baly Waldeck	Panicum barbinode		July
Championaspis interrupta (Champ.) San Pedro	Ipomoea purga f Ipomoea tiliacea f		January, June. Adults emerged January 23.
Chelymorphea gressoria Boh. var. Cartago Tarrazu Waldeck	Calea urticifolia axillaris Coffea arabica Panicum barbinode		July, September
Chirida guttata (Oliv.) San Isidro de Coronado	Ipomoea batatas Ipomoea tiliacea	Pennisetum purpureum f	August, October, December
Colaspis hypochlora Lef. San Pedro Waldeck	"Lirio virginal" Theobroma cacao	Hibiscus rosa-sinensis	April, July
Colaspis prasina Jacoby San Pedro	Clerodendron fragrans		July
Colaspis submetallica Jacoby?	Monstera pertusa		
Colaspoides batesi Jacoby Paso Ancho San Pedro	Hamelia erecta Trichilia havanensis f		February, June, August to December.

Insect and locality	C o l l e c t e d o n	Date and notes
Coptocycla amoena Boh. San Pedro	Eugenia jambos Sida rhombifolia	Tabernaemontana begoniae- flora
Coptocycla atalanta Boh. Paso Ancho San Pedro	Citharexylum caudatum Eugenia jambos Trichilia havanensis f	November to January
Cryptoccephalus trizonatus Suffr. Alajuelita San Isidro de Coronado Tarrazu	Alnus acuminata Asclepias curassavica Cestrum aurantiacum Chayota edulis Citrus aurantifolia f Ipomoea tiliacea Lagerstroemia indica	Morus rubra Psidium molle Ricinus communis f Spondias purpurea Tournefortia foetidissima Viola odorata
Ctenochira aberrata Weise Waldeck	Elaeis guineensis	July
Ctenochira cumulata (Boh.) Cachi Paso Ancho San Vicente de Moravia Torito	Anacardium occidentale Citrus limonia Coffea arabica Coix mayuen Elaeis guineensis Erythrina rubrinervia Eupatorium odoratum	February, April, June, August, December
Ctenochira rubrocincta (Boh.) Paso Ancho	Inga roussovia	December

Insect and locality	Collected on	Date and notes
Ctenochira vivida (Boh.) San Pedro	Annona cherimola Erythrina rubrinervia	Sapium caudatum April, June, December
Dachrys bipartita Jacoby? San Pedro	Rosa sp.	June
Deloyala testudinaria (Boh.) Paso Ancho Santa Ana Waldeck	Cestrum macrophyllum Chayota edulis Malpighia glabra Physalis lagascae	Solanum seaforthianum f Theobroma cacao April to August, November
Diabrotica balteata Lec. Alajuela Paso Ancho Pavas de Turrialba San Isidro del General	Aleurites moluccana Allium cepa Althaea rosea Amaranthus cruentus Brassica japonica Citrus sinensis Coffea arabica Cucumis sativus Cucurbita pepo Ficus carica Fragaria chiloensis	Gossypium barbadense f Grass Helianthus annuus Impatiens balsamina Ipomoea batatas Portulaca oleracea Rosa spp. Solanum nigrum Triticum aestivum Verbena spp. Vernonia brachiata Throughout the year.
Diabrotica corusca Jacoby Tarrazu	Coffea arabica	August

Insect and locality	C o l l e c t e d o n	Date and notes
Diabrotica fulvicornis Jacoby Ia Carpintera Paso Ancho San Isidro de Coronado Santa Barbara de Heredia	Annona cherimola Blakea gracilis Canangium odoratum Conostegia lanceolata Cornutia pyramidata Cucurbita pepo Daucus carota Hamelia erecta	Lycopersicum esculentum f Sapium caudatum f Solanum nigrum Solanum tuberosum Tabebuia pentaphylla Terminalia catappa Trichilia havanensis
Diabrotica fulvosignata Baly	Anacardium occidentale Panicum maximum	April
Diabrotica nummularis Harold Alajuela San Isidro de Coronado Santa Ana Tarrazu	Althaea rosea Amaranthus spinosus f Borago officinalis Brassica japonica Brassica rapa Cajanus bicolor Calonyction aculeatum Canna indica Capsicum annuum Casuarina equisetifolia Cirsium costaricensis Citrus vulgaris Citrus limonia Coix lacryma-jobi Coix mayuen Coriandrum sativum Cornutia pyramidata Cynara scolymus Cyperus alternifolius	Erythrina glauca Fortunella japonica f Fragaria chiloensis Fuchsia sp. Garcinia tinctoria Gossypium barbadense f Grevillea robusta f Helianthus annuus f Hibiscus esculentus Hibiscus sabdariffa f Hibiscus schizopetalus Holcus sorghum Indigofera suffruticosa f Ipomoea purga Iresine herbsti Jacaranda ovalifolia Jacobinia coccinea Linum usitatissimum f Loniceria japonica

Insect and locality	C o l l e c t e d o n	Date and notes
Diabrotica nummularis-- Cont'd.	<i>Malacra radiata</i> f <i>Mangifera indica</i> f <i>Nicotiana tabacum</i> <i>Passiflora ligularis</i> <i>Passiflora quadrangularis</i> f <i>Pennisetum purpureum</i> f <i>Persea pittieri</i> <i>Petroselinum hortense</i> f <i>Phaseolus helvolus</i> f <i>Phytolacca octandra</i> <i>Pisum sativum</i> f <i>Rubus spp. (Blackberry)</i>	<i>Salix chiloensis</i> f <i>Salvia splendens</i> f <i>Sambucus mexicanus</i> f <i>Sapium caudatum</i> <i>Solanum lanceolatum</i> simu- <i>atum</i> f <i>Spondias purpurea</i> f <i>Tephrosia toxicaria</i> f <i>Trema micrantha</i> <i>Triticum aestivum</i> <i>Valerianoides cayannense</i> <i>Vernonia brachiata</i> f <i>Vitis rotundifolia</i> <i>Vitis tiliaefolia</i> <i>Zantedeschia aethiopica</i> f
Diabrotica porracea Harold Orosi Paso Ancho San Isidro de Coronado Santa Ana Santa Barbara de Heredia	<i>Borago officinalis</i> f <i>Coix mayuen</i> <i>Coreopsis lanceolata</i> <i>Cucurbita pepo</i> <i>Cyclanthera pedata</i> <i>Helianthus annuus</i> f	<i>Hibiscus rosa-sinensis</i> f <i>Holcus sorghum</i> <i>Linum usitatissimum</i> <i>Pyrus communis</i> <i>Zinnia elegans</i> f
Diabrotica theimeii Baly Paso Ancho	<i>Cirsium costaricensis</i> f <i>Citrullus vulgaris</i> f <i>Cucurbita pepo</i> f	January to March, July to September, December
Diabrotica variabilis Jacoby? Paso Ancho San Pedro	<i>Desmodium sp.</i> <i>Ficus carica</i> <i>Ipomoea purga</i> <i>Lantana canara</i> <i>Meibomia sp.</i> f	February, July, October, December.

Insect and locality	C o l l e c t e d o n	Date and notes
Diabrotica viridula (F.) Orosi Paso Ancho Santa Ana	Amygdalus persica Brassica japonica Cajanus bicolor Citrus paradisi Coix mayuen Dahlia rosea Holcus sorghum	Ipomoea batatas Ipomoea purga Prunus salicina Psidium cattleianum Solanum tuberosum Tripsacum laxum
Diabrotica vittata (F.) Pas Ancho	Citrullus vulgaris Mangifera indica	Passiflora ligularis
Diphaulaca nitida Jacoby Cachi La Carpintera San Pedro	Cestrum aurantiacum Sapium caudatum f	Throughout the year. January, February
Disonycha austriaca (Schauf.) var. Waldeck	Achyranthes aspera	Sida rhombifolia July
Disonycha collata (F.) Waldeck	Amaranthus cruentus f	Panicum barbinode April, July
Disonycha figurata Jacoby Alajuelita	Crotalaria striata f	January
Disonychaglabrata (F.) San Pedro	Amaranthus cruentus	June, July
Disonycha recticollis Jacoby? San Pedro	Citrus limonia Lycopersicum esculentum f Polygonum punctatum f	Prunus salicina April, May, July to September.

Insect and locality	C o l l e c t e d o n	Date and notes
Dolichotoma bisbiplagiata Ed. Waldeck	Cornutia pyramidata	April, June, July
Doryphora spectanda Stål Santa Ana	"Huesillo"	July
Epitrix fuscata (Duv.) San Isidro de Coronado Santa Ana	Amaranthus cruentus Apium graveolens Celosia cristata Cucurbita pepo Ficus carica Fragaria chiloensis	Throughout the year.
Galeruca encaustica Germ. Alajuela Tarrazu Waldeck	Cestrum macrophyllum Coffea arabica Theobroma cacao	July, August
Galerucella lineatipennis Jacoby San Pedro	Cornutia pyramidata Croton gossypifolium	March, June, November to January.
Griburius panamensis (Jacoby) Guadalupe	Solanum torvum	May
Homophoea albofasciata Jacoby San Pedro	Solanum tuberosum	March

Insect and locality	C o l l e c t e d o n	Date and notes
Homophoeta cyanipennis octo- maculata (Crotch) San Isidro del General Waldeck	Aleurites moluccana Blighia sapida Citharexylum caudatum Citrus limetta Coix mayuen Cytisus fragrans Helianthus annuus Hibiscus sabdariffa Linum usitatissimum Lacuna mammosa Manihot esculenta	Melinis minutiflora Nicotiana tabacum Panicum barbinode Paspalum fasciculatum Passiflora ligularis Persea pittieri Portulaca oleracea Sesamum orientale Solanum tuberosum Triticum aestivum Vitis tiliaefolia
Lema chiriquensis Jacoby San Pedro	Chayota edulis Ipomoea tiliacea Malacra radiata	July, August, November
Lema dorsalis Oliv. Pavas de Turrialba San Pedro	Grass Ipomoea purga	January, February
Lema foveipennis Jacoby? San Pedro	Rumex crispus	January
Lema sallaei Jacoby Pavas de Turrialba San Pedro	Grass Ipomoea purga	January, February
Leptinotarsa undecimlineata (Stål) La Carpintera San Isidro de Coronado		

Insect and locality	C o l l e c t e d o n		Date and notes
Malacorhinus decempunctatus Jacobv Paso Ancho	Annona cherimola Colocasia esculenta Inga leptolaba	f	August, October to December. Usually found between leaves webbed together by other insects.
Metriona crucipennis (Boh.) San Pedro	Cestrum aurantiacum	f	Abundant. July.
Metriona emarginata (Boh.)	Ipomoea purga Ipomoea tiliacea	f	July
Metriona zona (F.)	Elaeis guineensis		April
Nodonota irazuensis (Jacoby) Orosi	Aleurites moluccana Althaea rosea	f	Throughout the year. Causes serious injury.
San Isidro de Coronado	Amaranthus spinosus		
San Isidro del General	Antigonon leptopus	f	
Santa Ana	Apium ammi		
Tarrazu	Bauhinia violacea		
	Beta vulgaris cicla		
	Blighia sapida	f	
	Brassica japonica	f	
	Cajanus bicolor	f	
	Calonyction aculeatum	f	
	Cassia alata		
	Cassia reticulata		
	Celosia cristata		
	Cestrum macrophyllum	f	
	Citrus nobilis x C. para- disi		
	Codiaeum variegatum		
	Coix mayuen		
	Coriandrum sativum	f	
	Cosmos sulphureus	f	
	Dahlia sp. (Catalina)	f	

Insect and locality	C o l l e c t e d o n	Date and notes
Nodonota irazuensis--Cont'd.	Dahlia rosea f	Philadelphus trichapetalus
Desmodium sp.		Phoebe tonduzii f
Dovyalis hebecarpa		Poinciana regia f
Eucalyptus trachyphloia		Poinsettia pulcherrima f
Eugenia malaccensis		Polygonum punctatum f
Fortunella japonica		Pouteria cainito f
Gardenia jasminoides		Psidium cattleianum f
Garcinia tinctoria		Psidium friedrichstahlianum f
Gossypium barbadense		Radicula armoracia f
Gaillielma utilis	f	Rheum rhaponticum f
Helianthus annuus	f	Rhodedendron mucronatum f
Hibiscus esculentus	f	Ricinus communis f
Hibiscus sabdariffa	f	Rubus spp. (Blackberry) f
Hicoria pecan	f	Ruta graveolens f
Inga roussoviaana	f	Salvia splendens f
Ipomoea purga	f	Sambucus mexicana f
Iris laevigata	f	Scabiosa atropurpurea f
Jacobinia coccinea	f	Sida rhombifolia f
Jussiaea decurrens		Solanum torvum f
Lactuca sativa	f	Spondias purpurea f
Lycopersicum esculentum	f	Telanthera ficoides f
Maranta arundinacea		Tephrosia toxicaria f
Melia azedarach		Tetragonia expansa f
Mimosa sp.	f	Thymus vulgaris f
Nicotiana tabacum		Tournefortia foetidissima f
Ochroma lagopus	f	Triticum aestivum f
Ocimum basilicum		Vinca rosea f
Passiflora edulis	f	Vitis rotundifolia f
Pennisetum purpureum	f	Vitis tiliacifolia f
Phaseolus helvolus	f	Watsonia sp. f
		Xanthosoma hellevatorii-folium f

Insect and locality	C o l l e c t e d o n		Date and notes
Nodionota lateralis (Jacoby)	Acacia costaricensis	f	f
Cartago	Acacia farnesiana	f	Gomphrena globosa
Paso Ancho	Amaranthus cruentus		Gossypium barbadense
San Isidro de Coronado	Amygdalus persica		Hibiscus esculentus
San Isidro del General	Anethum graveolens		Hibiscus rosa-sinensis
Santa Ana	Annona cherimola	f	Hibiscus sabdariffa
	Annona squamosa		Holcus sorghum
	Antigonon leptopus		Impatiens balsamina
	Asclepias curassavica		Inga roussovia
	Bidens pilosa		Ipomoea batatas
	Bombacopsis fendleri		Lactuca sativa
	Borago officinalis	f	Lantana camara
	Eryophyllum pinnatum		Linum usitatissimum
	Buddleia davidi		Malanthera aspera
	Byrsonima crassifolia		Morus rubra
	Cajanus bicolor	f	Nicotiana tabacum
	Capsicum annuum		Ocimum basilicum
	Casimiroa edulis		Phaseolus helvolus
	Cassia alata	f	Philadelphus trichapetalus
	Cassia reticulata		Phytolacca octandra
	Cassia spectabilis		Polyanthes tuberosa
	Chayota edulis		Punica granatum
	Citrus aurantium		Rosa spp.
	Clerodendron fragrans		Rubus sp. (Blackberry)
	Coix lacryma-jobi		Scabiosa atropurpurea
	Coix mayuen		Salvia splendens
	Coriandrum sativum	f	Sambucus mexicana
	Cosmos sulphureus	f	Solanum tuberosum
	Cucurbita pepo	f	Solanum wendlandi
	Fortunella japonica		Tagetes erecta
	Erythrina rubrinervia		Tournefortia foetidissima
	Garcinia tinctoria	f	Triumfetta josefina
	Gardenia jasminoides		Vernonia brachiata
	Theobroma cacao		

Nuzonia isthmica Champ.

Waldeck

April, July

Insect and locality	C o l l e c t e d o n	Date and notes
Oedionychis championi Jacoby San Pedro	Citharexylum caudatum f Hamelia erecta	Tabebuia pentaphylla June, August
Oedionychis inscripta Jacoby Paso Ancho	Jasminum sambac	April
Oedionychis reichei Harold Waldeck		April, July. Abundant.
Oedionychis tenuicincta Jacoby Santa Barbara	Coffea arabica Lippia berlandieri	November
Pachybrachys femoratus (Oliv.) Paso Ancho	Ficus carica Rosa spp.	
Plagiodera bis-tripunctata Duvivier? San Pedro	Xylosma flexuosa Xylosma panamense	June
Plagiodera congesta Stål? Paso Ancho San Pedro	Coffea arabica Polygonum punctatum Xylosma sp. f	March to November
Pseudomesomphalia isthmica (Champ.) San Pedro	Chayota edulis Citrus sinensis Holmskjoldia sanguinea f Ipomoea purga f Ipomoea tiliacia	January, June to November Passiflora ligularis Sida rhombifolia Xanthosoma sagittifolium
Pseudomesomphalia pictilis (Boh.) San Pedro	Citrus sinensis	July, October Passiflora ligularis

Insect and locality	C o l l e c t e d o n	Date and notes
Rhabdopterus jansoni Jacoby Alajuela	Coffea arabica	May
Sangaria haagii Harold? San Pedro	Annona cherimola	June
Systema s-littera (L.) Chiz	Achyranthes aspera	February, May, July
Pavas de Turrialba San Pedro	Panicum barbinode Panicum maximum	
Waldeck	Paspalum fasciculatum Solanum tuberosum	
Systema ustulata Harold Chiz	Panicum maximum Vernonia brachiata	February. Abundant.
Pavas de Turrialba Turrialba		
Uroplata aterrima Guer? La Carpintera San Pedro	Vernonia brachiata	February, April, October
Xenochalepus amplipennis (Baly) Paso Ancho San Pedro	Erythrina rubrinervia f	January, November
Xenochalepus omogerus (Crotch) San Jose San Isidro de Coronado San Pedro	Canavalia ensiformis f Coffea arabica Phaseolus lunatus	January, August, December
Xenochalepus waterhousi (Baly) San Pedro	Erythrina rubrinervia f	July

Insect and locality	C o l l e c t e d o n	Date and notes
<p>CLERIDAE</p> <p><i>Ptinus latefasciatus</i> Gornh. Paso Ancho San Pedro</p>	<p><i>Eriobotrya japonica</i> <i>Eugenia jambos</i></p>	<p>June, December</p>
<p>COCCINELLIDAE</p> <p><i>Cycloneda pallidula</i> (Muls.) Tarrazu</p>	<p><i>Coffea arabica</i></p>	<p>August</p>
<p><i>Cycloneda sallaei</i> (Muls.) San Pedro</p>	<p><i>Persea americana</i></p>	<p>September</p>
<p><i>Epilachna defecta</i> Muls.</p>	<p><i>Chayota edulis</i> <i>Citrus aurantium</i> <i>Hibiscus rosa-sinensis</i></p>	<p><i>Solanum lanceolatum sin- uatum</i> f</p>
<p><i>Epilachna vincta</i> Crotch Vuelta de Jorco</p>		<p>July</p>
<p><i>Epilachna virgata</i> Muls.</p>	<p><i>Eugenia jambos</i></p>	<p>April, August</p>
<p><i>Scymnus horni</i> Gornh. Paso Ancho San Pedro</p>		<p>January, May Predacious on <i>Apnis</i> <i>Gossypii</i> Glov. and <i>A. nerii</i> Boyer.</p>
<p>CUCUJIDAE</p> <p><i>Telephanus grossicornis</i> Nevermann Santa Barbara de Heredia</p>	<p><i>Saccharum officinarum</i></p>	<p>August</p>
<p><i>Telephanus melanchlorus</i> Nevermann San Pedro</p>	<p><i>Sapium caudatum</i></p>	<p>September</p>

Insect and locality	C o l l e c t e d o n	Date and notes
DASYLLIDAE Ptilodactyla maculata Champ.? Waldeck	Theobroma cacao	April
DERMESTIDAE Cryptorhopalum balteatum Lec. San Pedro	Chrysanthemum maximum Dombeya wallichii	Indigofera suffruticosa f
Cryptorhopalum triste Lec. Paso Ancho	Chrysanthemum maximum Guilielma utilis	Tagetes erecta f December, January. Feeds on pollen.
ELATERIDAE Aeolus facetus Canad. Waldeck	Theobroma cacao	April
Aptopus chiriquensis Champ. Santa Barbara de Heredia	Zea mays	August
Glyphonyx quadraticollis Champ. San Pedro	Persea americana	June
Semiotus superbus Kirsch. La Carpintera	Lantana trifolia	February
ENDOMYCHIDAE Stenotarsus flavago Gorb. Tarrazu	Coffea arabica	September
EROTYLIDAE Homoeotelus jansoni Crotch	Cestrum lanatum	December
Mycotretus luteipes Lacord.	Cestrum macrophyllum	April
Zonarius jansoni Crotch Waldeck	Theobroma cacao	July
	Hibiscus rosa-sinensis	

Insect and locality	Collected on	Date and notes
HISTERIDAE		
Holocepta quadridentata (F.) San Pedro	Clayota edulis	July
LACRIIDAE		
Statira triangulifer Champ. Santa Barbara de Heredia	Zea mays	August
Statira tropicalis Champ. Waldeck	Theobroma cacao	July
LAMPYRIDAE		
Aspidosoma aegrotum Gorh. San Pedro	Sambucus mexicanus	June
Aspidosoma laterale (F.) San Pedro	Cissus sicyoides Croton gossypifolium	August
Hyas bipunctatus Gorh. Santa Ana	Guazuma ulmifolia	July
Lucidota bella Gorh? Waldeck	Inga sp.	April
Lucio castelnaui Kirsch. Waldeck	Elaeis guineensis	April
Photinus volcanicus Gorh? Waldeck	Theobroma cacao	April

Insect and locality	Collected on	Date and notes
LANGURIIDAE. Teretilinguria metallica Gorn. Waldéck	Ureia baccifera	July
LYCIDAE Caenia cardinalis Gorn. Paso Ancho	Rosa sp. f	December
Calopteron bifasciatum Gorn. San Isidro del General	Annona muricata Conostegia lanceolata	June, November
Calopteron cyaneum Erichs. Paso Ancho	Ricinus communis	October
Calopteron obliquum (Say) San Pedro	Passiflora quadrangularis f	May
Calopteron papale Kirsch. San Isidro del General	Zea mays	June
Calopteron pennatum Bourgeois San Pedro	Canarium odoratum	November, December
Calopteron reticulatum (F.) Paso Ancho	Bixa orellana	June to August,
San Isidro del General	Cestrum lanatum	October, December.
San Pedro	Coix lacryma-jobi	Abundant
Santa Ana	Coix mayuen	
	Citharexylum caudatum	
	Croton gossypifolium f	
	Cucurbita pepo	
	Elaphrium sinaruba	
	Zea mays	
	Veronia brachiata f	
	Solanum umbellatum	
	Rosa sp.	
	Jasminum sambac	
	Erythrina rubrinervia	
	Coffea arabica	

Insect and locality	Collected on	Date and notes
<i>Celopteron suturale</i> Gorb. San Pedro	<i>Rosa</i> spp.	January
<i>Plateros evanides</i> Gorb.	<i>Spondias purpurea</i>	July
<i>Plateros ochraceus</i> Gorb. San Pedro Tarrazu	<i>Citrus sinensis</i> <i>Coffea arabica</i> <i>Hamelia erecta</i> <i>Inga tonduzii</i>	January, April to June, August, September
MELACHIIDAE <i>Attalus cerinatus</i> Gorb.? Paso Ancho San Pedro	<i>Inga roussoviriana</i>	April, November
MELASIDAE <i>Deltometopus foveolatus</i> Guer. Paso Ancho	<i>Casimiroa edulis</i>	May
MELOIDAE <i>Epicausta grammica</i> (Fisch.) San Pedro	<i>Canna indica</i>	November
MELYRIDAE <i>Listrus canescens</i> Marn. Paso Ancho San Pedro	<i>Calliandra grandiflora</i> <i>Callistephus chinensis</i> <i>Calonyction aculeatum</i> <i>Chenopodium ambrosioides</i> <i>Carysanthemum maximum</i> F <i>Coreopsis lanceolata</i> <i>Cosmos sulphureus</i> <i>Dahlia rosea</i> <i>Donbeya wallichii</i>	January, July, November, December. Adult injures flower by eating pollen.
	<i>Gerbera jamesoni</i> <i>Impatiens balsamina</i> <i>Iris laevigata</i> <i>Lonicera japonica</i> <i>Phaseolus vulgaris</i> <i>Phytolacca octandra</i> <i>Rosa</i> spp. <i>Sambucus mexicana</i> <i>Tagetes patula</i>	

Insect and Locality	Collected on	Date and notes
MYCETOPHAGIDAE Litteragus balteatus Lec. San Pedro	Penicillium sp. f	May
MITIDULIDAE Conotelus mexicanus Murr.	Dahlia sp. (Catalina) Polianthes tuberosa	February, June, December.. In the flower
Conotelus stencoides Murr. Paso Ancho	Calonyction aculeatum Chrysanthemum maximum Dahlia rosea Datura candida Dombeya wallichii	January, February, June, September to December. In the flower.
SCARABAEIDAE Calomacraspis haroldi Cand. San Isidro del General	"Cola de Chive" (Fern)	March
Canthon viridis (Beauv.) San Pedro	Solanum tuberosum	August
Dichrouina dimidiata (Burn.) San Pedro	Datura candida	October. In flower.
Euphoria candezei Janson San Pedro	Vernonia brachiata f	May

Insect and locality	C o l l e c t e d o n		Date and notes
<i>Faulla brunneipennis</i> Bates San Pedro Paso Ancho Guadalupe	<i>Acnistus arborescens</i> <i>Citrus limonia</i> <i>Citrus sinensis</i> <i>Dahlia rosea</i> <i>Gossypium</i> sp. <i>Hibiscus rosa-sinensis</i> <i>Impatiens balsamina</i>	f f f f f f	April f f f f f
<i>Gymnetis liturata</i> (Oliv.) Paso Ancho San Isidro del General	<i>Ananas sativus</i> <i>Musa sapientum</i> <i>Psidium guajava</i>		June to October <i>Spondias purpurea</i> <i>Trichilia havanensis</i>
<i>Gymnetis stellata</i> (Latr.) Grecia	<i>Citrus nobilis</i>		November. Adult drinking sap at wound in bark.
<i>Hoplia argyritis</i> Bates <i>Hoplia surata</i> Bates	<i>Vernonia brachiata</i> <i>Persea americana</i>	f f	June
<i>Macraspis lucida</i> (Oliv.) San Isidro del General	<i>Citrus sinensis</i> <i>Anacardium occidentale</i>	f f	May. Abundant on flowers of <i>C. sinensis</i> and on fruit of <i>A. occidentale</i> .
<i>Macroductylus lineatus</i> Chevr. Paso Ancho San Pedro	<i>Byrsonima crassifolia</i> <i>Citrus limonia</i> <i>Hymenaea courbaril</i>	f	June <i>Impatiens balsamina</i> <i>Polygonum punctatum</i>

Insect and locality	C o l l e c t e d o n	Date and notes
Macroductylus suavis Bates Alajuela	Citrus nobilis x C. paradisi f Coffea arabica f Fortunella japonica Heliotropium peruvianum	Hicoria pecan Persea americana Spondias purpurea Vernonia brachiata
Macroductylus sylphis Bates	Citrus limonia f Citrus nobilis x C. paradisi f	Fortunella japonica Vernonia brachiata
Onthophagus marginicollis Harold Santa Ana	Verbesina turbacensis	July
Pachystethus marginata (F.) Rancho Redondo	Zantedeschia aethiopica	July
Pachystethus nitidula (Blanch.) Rancho Redondo	Calonyction aculeatum f Panicum barbinode	March. Feeding in flower of C. aculea- tum.
Pelidnota costaricensis Bates Paso Ancho San Pedro	Asparagus plumosus Nicotiana tabacum	May, June
Pelidnota strigosa Castelnau Santa Ana	Tripsacum laxum	September
Strigoderma rutelina Bates	Asparagus plumosus	
STAPHYLINIIDAE		
Xanthophagus solskyi Sharp Paso Ancho San Pedro		August, September. Eating Nodonta ira- zuensis and Diabrotica mumularis.

Insect and locality	C o l l e c t e d o n	Dates and notes
Xanthophagus solskyi Sharp--Cont'd. San Pedro--Cont'd.	Impatiens balsamina f	Feeding at leaf glands.
TENEBRIONIDAE		
Choaspes purpureus Champ. Waldeck	Theobroma cacao	July
Ditaphrenotus foveicollis Champ. San Pedro	Coffea arabica	May. In bark wound.
Epitragopsis godmani (Champ.) Alajuelita	Vernonia brachiata	January
Gnathocerus cornutus (F.) Palmares del General	Stored tobacco seed f	March
Hegemona costaricensis Champ. San Pedro	Sporolobus indicus	December
Lobometopon guatemalensis (Champ.) Alajuelita San Isidro de Coronado Santa Barbara de Heredia	Annona squamosa Brassica japonica Byrsonima crassifolia Celliandra grandiflora Chrysanthemum maximum	Throughout the year. Eats pollen and rust fungus on wheat and on I. roussoviana.
Schoenicus panamensis Champ. Alajuelita	Crotalaria striata Poinsettia pulcherrima Psidium guajava	November. Feeding at nectary of flower of P. pulcherrima.
Strongylium permodicum Maklin? Alajuela	Inga sp. Urera baccifera	May, July

Insect and locality	C o l l e c t e d o n	Date and notes
Zopherus costaricensis Champ. Terrazu	Coffee arabica	August. Common and well-known insect.
THROSCIDAE		
Drapetes taeniolatus Horn San Pedro	Cestrum aurantiacum	Impatiens balsamina
Lissonus inopinatulus Horn San Isidro del General	Citrus sinensis	June
HYMNOCOPHORA		
Acanthoscelides obtectus (Say) San Jose	Stored beans	August
Anypotectus oxillis Boh.	Pyrus communis	July, October
Anypotectus bicaudatus Champ. Waldeck	Theobroma cacao	April
Attelabus laeviscolis Gyll. Guadalupe San Pedro	Spondias purpurea	July, November
Centrinaspis trivittatus Champ. Paso Ancho San Pedro	Cestrum aurantiacum Impatiens sultani	May, June
Cleistolopius similis (Chevr.) Paso Ancho Ujarras	Cassia sophora Dahlia rosea Gynierium sagittatum	January, October
Conotrachelus fulvescens Champ.	Cornutia pyramidata	December

Insect and locality	C o l l e c t e d o n		Date and notes
Conotrachelus perseae Barber San Pedro	Pyrus communis		
Conotrachelus rectirostris Champ. Paso Ancho	Inga paterno	f	June, August September. Reared in fruit.
Copturus ruficollis Champ. Waldeck	Theobroma cacao		April
Cosmopolites sordidus (Germ.) Guacimo San Carlos			October
Eurhinus festivus (F.) Paso Ancho	Cissus sicyoides		
Exophthalmus jekelianus (White)	Citrus nobilis	f	April
Geraeus lentiginosus (Bon.) Paso Ancho San Pedro Turrialba Waldeck	Celosia argentea Chayota edulis Citharexylum caudatum Coix mayuen Crotalaria fulva Erythrina rubrinervia Gomphrena globosa		May. In flowers.
Geraeus lineellus (Lec.) Paso Ancho Waldeck Ujaras	Andropogon bicornis Coix lachryma-jobi Inga roussovia Myosotis sylvatica	f	July to September, December
Geraeus senilis Gyll. Santa Ana			

Insect and locality	Collected on	Date and notes
<i>Heilipus pittieri</i> Fisch. Guadalupe	<i>Persea americana</i> f	March, September. Eats holes in leaves.
<i>Heilipus trifasciatus</i> F. San Pedro	<i>Citrus sinensis</i>	
<i>Hoplocapturus varipes</i> Champ. San Pedro	<i>Xanthosoma</i> sp. f	August
<i>Lechriops auritus</i> Boh. Paso Ancho San Pedro	<i>Dovyalis hebecarpa</i>	January, June.
<i>Lepidobaris acnisti</i> Champ. Paso Ancho	<i>Acristus arborescens</i>	August
<i>Lixus apterus</i> Champ. La Carpintera	"Purca"	February
<i>Metamasius sericeus</i> (Oliv.) Alajuela Guadalupe Paso Ancho	<i>Cocos nucifera</i> <i>Musa paradisiaca</i> f	January, May, October. Eats into midribs of plantain.
<i>Metamasius submaculatus</i> Champ. Paso Ancho	<i>Musa paradisiaca</i>	May
<i>Nicentrus lineicollis</i> Boh. Paso Ancho Turrialba	<i>Impatiens balsamina</i> <i>Indigofera suffruticosa</i> <i>Iris laevigata</i> <i>Leonurus sibericus</i> <i>Myosotis sylvatica</i>	January, February, May, August.
	<i>Nicotiana tabacum</i> <i>Phaseolus vulgaris</i> <i>Rosa</i> spp. f/ <i>Vernonia brachiata</i>	

Insect and locality	Collected on	Date and notes
<i>Phaenithon curvipes</i> (Germ.) Santa Elena de Tarrazu	<i>Inga leptolaba</i>	January
<i>Rhinospathe albomarginata</i> Chevr. Santa Ana	<i>Pennisetum purpureum</i>	
<i>Rhinoclemens stigma</i> (L.) San Isidro del General	<i>Hymenaea courbaril</i> f	May. Reared in seed
<i>Rhodobaenus cinctus</i> Gyll. San Pedro	<i>Vernonia brachiata</i> f	May, June
<i>Raynochophorus palmarum</i> (L.) San Isidro del General	<i>Musa sapientum</i> f	July. In fruit.
<i>Scyphophorus interstitialis</i> Gyll. San Jose	In processed coffee	January
<i>Sitophilus oryzae</i> (L.) Guadalupe San Pedro Santa Barbara de Heredia	Stored dried plantain fruit Zea mays	January, July, August
<i>Steirarrhinus cupreotinctus</i> Champ. San Pedro	<i>Annona cherimola</i>	May, June
<i>Steirarrhinus</i> sp.	<i>Bidens pilosa</i> <i>Byrsonima crassifolia</i> <i>Cestrum aurantiacum</i> <i>Jussiaea decurrens</i>	Preyed upon by <i>Apionorus subpiceus</i> Stål.
	<i>Sambucus mexicana</i> <i>Trema micrantha</i> f <i>Tournefortia foetidisima</i>	

HEMIPTERA

Insect and locality	Collected on	Date and notes
ANTHOCORIDAE		
Triphleps tristicolor White San Pedro	Ananthurus spinosus	Triticum aestivum April, December
COREIDAE		
Acanthocephala declivis guatemalena Dist. Paso Ancho	Citrus aurantifolia Citrus medica Citrus paradisi	Ficus carica Persea americana f i f i
Acanthocephala luctuosa (Stål) San Pedro	Vernonia brachiata	
Anasa bellator (F.) San Pedro	Polakowskia tacaco	f i June
Anasa litigiosa Stål Ujaras	Lantana camara	February
Anasa madida Dist. San Pedro	Annona muricata Passiflora quadrangularis	August, October
Anisoscelis gradadia Dist.	Erythrina rubrinervia Passiflora ligularis	January, July, August
Archimerus scutellaris (Stål)	Chayote edulis	October
Burtinus notatipennis (Stål) San Isidro del General San Pedro Tarrazu	Eugenia uniflora Ipomoea purga Vernonia brachiata Coffea arabica	January, March, July, August

Insect and locality	C o l l e c t e d o n	Date and notes
<i>Carpia punctata</i> Dallas San Pedro	<i>Cucurbita pepo</i>	February
<i>Cebrenis modesta</i> Dist.	<i>Impatiens balsamina</i>	January
<i>Corecoris fuscus</i> (Thunb.) Guadalupe San Pedro	<i>Brassica japonica</i> <i>Fragaria chiloensis</i> <i>Ipomoea tiliacea</i>	f April, May, June, August, October
<i>Corecoris granulatus</i> (Stål) San Pedro	<i>Passiflora ligularis</i>	September
<i>Corizus bohemanii</i> Sign. San Pedro	<i>Polygonum punctatum</i>	May
<i>Corizus lateralis</i> (Say) San Pedro	<i>Hibiscus rosa-sinensis</i>	June
<i>Corizus sidae</i> (F.) Guadalupe Paso Ancho Ujarras San Isidro del General	<i>Erythrina rubrinervia</i> <i>Grevillea robusta</i> <i>Hibiscus rosa-sinensis</i> <i>Inga roussovia</i> <i>Meibomia</i> spp.	February, April, May
<i>Harmostes affinis</i> Dallas Paso Ancho San Pedro	<i>Asparagus officinalis</i> f <i>Coix mayuen</i>	October
<i>Hyalymenus tarsatus</i> (F.) Ujarras Waldeck	<i>Citrus limonia</i> <i>Meibomia</i> sp. <i>Paspalum fasciculatum</i>	February, April, July
	<i>Psidium guajava</i>	

Insect and locality	C o l l e c t e d o n	Date and notes
Hypselonotus atratus Dist. Alajuelita Cartago San Isidro de Coronado	<p>Acnistus arborescens f Annona cherimola f Antigonon leptopus Bidens pilosa Bryophyllum pinnatum Byrsonima crassifolia Buddleia davidi Cajanus bicolor f Calea urticifolia axillaris Calliandra grandiflora Capsicum annuum Cassia alata Casuarina equisetifolia Citrus limetta Citrus limonia Citrus sinensis Coriandrum sativum Cosmos sulphureus f Dahlia rosea Ficus carica Gossypium barbadense Hibiscus rosa-sinensis</p>	<p>Throughout the year.</p>
Hypselonotus lineatus Stål.† Santa Ana	<p>"Huesillo" "Manteco" Chayota edulis f</p>	<p>July July</p>
Leptoglossus balteatus F.? San Pedro	<p>Inga roussovia Zea mays</p>	<p>May</p>

Insect and locality	C o l l e c t e d o n	Date and notes
Leptoglossus zonatus (Dallas) Paso Ancho San Isidro del General	Casuarina equisetifolia Cyperus alternifolius Gossypium sp.	Linum usitatissimum Psidium guajava Zea mays
Nematopus lepidus Stål Waldeck	Coix lacryma-jobi Elaeis guineensis	Inga sp. Panicum barbinode
Pachylis hector Stål San Isidro del General	Inga edulis f	May
Phthia lunata (F.)	Chayota edulis f	March
Phthia picta (Drury) San Isidro del General San Pedro	Annona cherimola Inga edulis Lycopersicum esculentum	February, May, June, March, November
Staluptus marginalis Burm. Paso Ancho	Cajanus bicolor f Chayota edulis f Citrus nobilis x C. paredisi	March, July, August
Zicca commaculata Dist. Waldeck	Amaranthus spinosus Panicum maximum	April, July
Zicca taeniola (Dallas) San Isidro del General Waldeck	Coix lacryma-jobi Coix mayuen Ipomoea purga Lantana trifolia Malacra radiata	March, May, June, November
CYDNIDAE		
Allocoris elegans McA. & M. San Pedro	Pennisetum purpureum Zea mays	May, August

Insect and locality	C o l l e c t e d o n	Date and notes
Pangaeus piceatus Stål Paso Ancho San Isidro del General San Jose	Cucurbita pepo Nicotiana tabacum Rheum rhaponticum	Sida rhombifolia February, May
Thyreocoris guttiger Stål San Isidro del General Santa Ana	Anaranthus cruentus Zea mays	March, July
LYGAEIDAE Acroleucus brevicollis (Stål) Paso Ancho	Acnistus arborescens Citrus limonia	September, October, November.
Acroleucus tullus (Stål) San Pedro	Impatiens balsamina	January, June
Epipolops oculus-caneri Deg. Alajuelita	Psidium guajava	January
Geocoris pallens Stål Paso Ancho	Inga roussoviana	April
Ligyrocoris litigious (Stål) San Isidro del General	Zea mays	February
Ligyrocoris multispinus Stål San Isidro de Coronado San Pedro	Brassica japonica Sida rhombifolia	July, December

Insect and locality	C o l l e c t e d o n	Date and notes
Lygaeus bistrigularis Say La Carpintera Paso Ancho San Isidro del General	Coix mayuen Crotalaria sp. Ipomoea tiliacea Pennisetum purpureum	Terminalia catappa Zea mays February, June, October
Lygaeus formosus Blanch. Alajuela San Pedro	Canna indica Citrus sinensis	March, November
Lygaeus pallido-cinctus Stål San Pedro	Jacaranda ovalifolia	January
Lygaeus reclinatus Say San Pedro	Amaranthus cruentus Rosa spp.	February, July
Lygaeus uhleri Stål	Citrus sinensis	June, October
Nysius californicus Stål	Amygdalus davidiana Annona cherimola Carissa grandiflora Persea pittieri	March, April, June
Oncopeltus cingulifer Stål	Annona cherimola Citrus aurantifolia f	December
Oncopeltus fasciatus (Dallas) Paso Ancho	Calyptranthes costaricensis	July

Insect and locality	C o l l e c t e d o n	Date and notes
Orthaea bilobata (Say)	Amaranthus cruentus	Throughout the year
San Rafael de Coronado	Amaranthus spinosus	
Santa Ana	Annona cherimola	
Torito	Artemisia absinthium	
	Buddleia sp.	
	Caladium bicolor	
	Carissa grandiflora	
	Coix mayuen	
	Fragaria chiloensis	
	Gerbera jamesoni	
	Heliotropium peruvianum	
Ortholomus jamaicensis Dallas	Coffea arabica	March, August. Abundant
Paso Ancho	Cucurbita pepo	in flower of S. splendens
	Ocimum basilicum	
MIRIDAE		
Calondas fasciatus Dist.	Hamelia erecta	August
San Pedro		
Ceratocapsus punctulatus (Reut.)	Linum usitatissimum	July
Paso Ancho		
Collaria oleosa (Dist.)	Amaranthus cruentus	April, May, June
Paso Ancho	Apeiba tibourbon	f
San Isidro de Coronado	Arachis hypogaea	f
Waldeck	Capricola dactylon	f
	Coix mayuen	f
	Cucurbita pepo	f
Creontiades rubrinervis (Stål)	Amaranthus spinosus	
Paso Ancho	Crotalaria spectabilis	
San Isidro de Coronado	Dianthus caryophyllus	
San Isidro del General	Fragaria chiloensis	
	Hibiscus sabdariffa	
	Holcus halepensis	
	Holcus sorghum	
	Lucuma mammosa	
	Medicago sativa	
	Morus rubra	
	Ocimum basilicum	
	Portulaca oleracea	
	Phaseolus helvolus	
	Phaseolus vulgaris	
	Salvia splendens	
	Solanum tuberosum	
	Petunia hybrida	
	Salvia splendens	
	Solanum tuberosum	
	Holcus halepensis	
	Holcus sorghum	
	Ixophorus unisetus	
	Panicum barbinode	
	Solanum tuberosum	
	Triticum aestivum	
	Hibiscus sabdariffa	
	Holcus halepensis	
	Holcus sorghum	
	Ligustrum japonicum	

Insect and locality	C o l l e c t e d o n	Date and notes
<p><i>Lygus sallei</i> Stål Paso Ancho San Isidro de Coronado San Jose San Rafael de Coronado R</p>	<p><i>Ageratum conyzoides</i> <i>Allium cepa</i> <i>Amaranthus cruentus</i> <i>Apium emmi</i> <i>Asparagus officinalis</i> <i>Bidens pilosa</i> <i>Eyrsonima crassifolia</i> <i>Celosia cristata</i> <i>Coffea arabica</i> <i>Chrysanthemum</i> sp. <i>Coix lacryma-jobi</i> <i>Coix mayune</i> <i>Conostegia lanceolata</i> <i>Curcubita pepo</i> <i>Euphorbia hoffmaniana</i></p>	<p><i>Helianthus annuus</i> <i>Hibiscus sabdariffa</i> <i>Inga laurina</i> <i>Myosotis sylvatica</i> <i>Panicum barbinode</i> <i>Phaseolus lunatus</i> <i>Phaseolus vulgaris</i> <i>Sepium caudatum</i> <i>Solanum tuberosum</i> <i>Tetragonia expansa</i> <i>Vitis vinifera</i> <i>Vitis rotundifolia</i> <i>Zea mays</i> <i>Zinnia elegans</i></p>
<p><i>Mala unicolor</i> Dist. Paso Ancho San Pedro</p>	<p><i>Erythrina rubrinervia</i></p>	<p>Throughout the year October. A pest of <i>Erythrina</i> spp.</p>
<p><i>Monalonia annulipes</i> Sign. Paso Ancho Waldeck</p>	<p><i>Hibiscus sabdariffa</i></p>	<p>April, August, October</p>
<p><i>Neurocolpus mexicanus</i> Dist.</p>	<p><i>Citharexylum caudatum</i> <i>Gossypium barbadense</i> <i>Impatiens balsamina</i> <i>Indigofera suffruticosa</i> <i>Lantana camara</i></p>	<p>May, July, August to November</p>
<p><i>Paracalocoris annulatus</i> Dist. Paso Ancho</p>	<p><i>Dianthus caryophyllus</i> <i>Erythrina rubrinervia</i> <i>Fortunella japonica</i> <i>Hamelia erecta</i></p>	<p>May, June, Sep- tember to Decem- ber</p>

Insect and locality	C o l l e c t e d o n	Date and notes
Paracalocoris jurgiosus (Stål)	Salvia splendens	
Paracalocoris molliculus Dist. Alajuela	Lantana camara	March
Platytyellus latipennis (Stål)	Bidens pilosa	January, July,
Paso Ancho	Phaseolus vulgaris	October
Santa Ana	Sesamum orientale	
Polymerus cuneatus (Dist.)	Amaranthus cruentus	April to October
Paso Ancho	Asclepias curassavica	Hibiscus sabdariffa
San Jose	Beta vulgaris cicla	Leonurus sibericus
	Byrsonima crassifolia	Panicum barbinode
	Cestrum aurantiacum	Solanum tuberosum f
Pycnoderes atratus (Dist.)	Grass	February,
Paso Ancho	Hibiscus sabdariffa	November
Paves de Turrialba		
Pycnoderes incurvus (Dist.)	Ageratum conyzoides	
Pycnoderes quadrimaculatus	Coix mayuen	January, August,
Guer.	Cucurbita pepo f	October, December
Paso Ancho		Hera roussoviaana
San Isidro de Coronado		Triaescentia sp.
San Pedro		
Reuteroscopus ornatus (Reut.)	Amaranthus spinosus	May, August
San Jose		
Stenodema guatemalana (Dist.)	Pennisetum clandestinum	May
Rancho Redondo		
Sysinas centralis Dist.	Canna indica	August, September;
Paso Ancho	Persea americana	October, November
San Pedro	Sapium aucuparium	f

Insect and locality	C o l l e c t e d o n		Date and notes
NABIDAE Nabis capsiformis Germ. San Isidro del General San Pedro	Solanum tuberosum	Zea mays	January, February
Nabis constrictus Champ. San Pedro Waldeck	Phaseolus vulgaris	Theobroma cacao	April, July, December
Nabis nigriiventris Stål ^o San Pedro	Amaranthus cruentus Crotalaria spectabilis	Diphysa robiniodes	June, July
NEIDIDAE Jalysus mollitus Dist. San Pedro Santa Ana	Buddleia sp. Eyrsonima crassifolia Citrus aurantifolia Coix mayuen	Eugenia malaccensis Iagenaria leucantha Vernonia brachiata	April to August
Jalysus reversus Van D. San Pedro	Amaranthus cruentus	Persea pittieri	January, May
PENTATOMIDAE Acrosternum marginatum (Beauv) Paso Ancho San Isidro del General San Jose	Beta vulgaris cicla Cajanus bicolor Coix mayuen Hibiscus rosa-sinensis	Phytolacca octandra Verbesina turbacensis Vernonia brachiata	February to Octo- ber
Chlorocoris aberrans Dist.	Casimiroa edulis	Elaeagnus umbellata	October

Insect and locality	C o l l e c t e d o n	Date and notes
Euschistus bifibulus (Beauv.) Paso Ancho San Isidro del General	Brassica japonica Byrsonima crassifolia Cleome spinosa Polygonum punctatum f	f March, May, August, September June, August, September, October, November, December
Euschistus bififormis Stål Paso Ancho San Isidro de Coronado San Pedro	Bidens pilosa Celosia cristata Lactuca sativa Linum usitatissimum	Zea mays October
Euschistus crenator (F.) Paso Ancho	Croton gossypifolium Myosotis sylvatica	June
Euschistus spurculus Stål Paso Ancho	Bidens pilosa	October. Predacious on Antianthe expansa (Germ.) and Colaspis prasina Jacoby
Euthyrhynchus floridanus (L.) San Pedro	Ligustrum japonicum	February
Homaemus proteus Stål San Pedro	Musa paradisiaca	June
Macropygium reticulare (F.) San Isidro del General	Malpighia glabra Musa paradisiaca	June, September
Mecistorhinus melanoleucus (Westw.) Paso Ancho	Chayota edulis f	February
Mecistorhinus tripterus (F.) San Isidro del General	Passiflora ligularis	

Insect and locality	C o l l e c t e d o n	Date and notes
Mormidea notulata (H.-S.) Paso Ancho	Bryophyllum pinnatum Chaetium bromoides Cucurbita pepo Hibiscus escelentus Hibiscus sabdariffa	Ipomoea purga Meibomia sp. Vernonia brachiata Xanthosoma helleborii- folium
Mormidea ypsilon (L.) San Pedro Waldeck	Coix lacryma-jobi Panicum barbinode Paspalum fasciculatum	July, August
Nezara viridula (L.) Paso Ancho Alajuelita San Isidro de Coronado	Annona cherimola Brassica japonica Cajanus bicolor Cassia alata Cattelya dowiana Cobaea scandens Coix mayan Commelina sp. Crotalaria striata Dianthus caryophyllus Galinzoga hispida Helianthus annuus Hibiscus rosa-sinensis Hibiscus sabdariffa Hymenaea courbaril	Linum usitatissimum Malacra radiata Passiflora edulis Passiflora quadrangularis Phaseolus helvulus Phaseolus lunatus Phytolacca octandra Polygonum punctatum Radicula armoracia Ricinus communis Rosa spp. Salvia splendens Trichopilia marginata Vernonia brachiata
Pharypia nitidiventris (Stål) San Pedro	Randia mitis	February, June, October
Piezodorus guildinii (Westw.) San Isidro del General	Psidium guajava Spondias mombin	February

Insect and locality	C o l l e c t e d o n	Date and notes
Podisus congres (Stål) Paso Ancho San Isidro de Coronado San Pedro	Annona cherimola Musa sapientum	April, July, December
Podisus lineolatus (H.-S.) Paso Ancho San Pedro	Inga roussoviana	August, October
Podisus thetis (Stål) Waldeck	Theobroma cacao	April
Proxys punctulatus (Beauv.)	Grass	June
Thyanta perditor (F.) Alajuela Alajuelita Paso Ancho San Isidro del General Santa Barbara de Heredia	<p>Althaea rosea f</p> <p>Amygdalus davidiana</p> <p>Amygdalus persica f</p> <p>Apium armi</p> <p>Bidens pilosa</p> <p>Calliandra grandiflora</p> <p>Cajanus bicolor f</p> <p>Cassia sophora f</p> <p>Chayota edulis f</p> <p>Citrus limonia f</p> <p>Coffea arabica</p> <p>Crotalaria juncea f</p> <p>Crotalaria striata f</p> <p>Crotalaria vitellina f</p> <p>Dianthus caryophyllus</p> <p>Fragaria chiloensis</p> <p>Hamelia erecta</p> <p>Helianthus annuus f</p>	<p>Throughout the year</p>
	Vernonia brachiata	
	<p>Heliotropium peruvianum f</p> <p>Hibiscus sabdariffa</p> <p>Holcus sorghum</p> <p>Impatiens balsamina</p> <p>Indigofera suffruticosa f</p> <p>Malus sylvestris f</p> <p>Psidium molle</p> <p>Saccharum officinarum f</p> <p>Salvia splendens</p> <p>Sida rhombifolia</p> <p>Triumfetta josefina</p> <p>Vernonia brachiata</p> <p>Vitis vinifera</p> <p>Zea mays</p>	

Insect and locality	C o l l e c t e d o n	Date and notes
PYRRHOCORIDAE		
Dysdercus flavo-limbatus Stål ^o	Coix lacryma-jobi	Theobroma cacao
Dysdercus mimulus Hussey	Acnistus arborescens	Hamelia erecta
Alajuelita	Althaea rosea	Hibiscus esculentus f
Santa Ana	Amaranthus cruentus	Hibiscus rosa-sinensis
	Annona muricata	Impatiens balsamina
	Asclepias curassavica	Ipomoea purga
	Bidens pilosa	Ipomoea tiliacea f
	Bryophyllum pinnatum	Leonurus sibiricus
	Buddleia sp.	Malacra radiata f
	Cestrum macrophyllum	Persea americana f
	Chrysanthemum maximum	Sedum sp. f
	Citnarexylum caudatum	Sida rhombifolia
	Citrus aurantifolia	Solanum nigrum
	Citrus limetta	Solanum tuberosum
	Citrus limonia	Taraxacum officinale
	Coix mayuen	Theobroma cacao
	Crotalaria striata	Verbesina turbacensis
	Erythrina rubrinervia	Vernonia brachiata
	Guazuma ulmifolia	Zea mays

Insect and locality	C o l l e c t e d o n	Date and notes
Dysdercus obliquus (H.-S.) Paso Ancho Tarrazu	Calonyction aculeatum Calyptranthes costaricensis Ceiba pentandra f Citharexylum caudatum Dahlia sp. (Catalina) Gossypium barbadense f Grass f Hibiscus abelmoschus f	f f f f f f f f
Dysdercus oncopeltus Dist. San Pedro	Malus sylvestris	April
Dysdercus ruficeps (Perty) Waldeck	Theobroma cacao	April
Euryophthalmus cinctus (H.-S.) San Isidro del General San Pedro Santa Ana Torito Waldeck	Ananas sativus Heliotropium peruvianum Ipomoea sp. Malacra radiata Persea americana f Zea mays	April, June, July
Stenomacra marginella (H.-S.) Paso Ancho Santa Barbara de Heredia	Acnistus arborescens Ageratum conyzoides Amaranthus spinosus f Averrhoa carambola Bauhinia monandra Bidens pilosa Bombax ellipticum Brassica japonica Byrsonima crassifolia f Calonyction aculeatum f Calyptranthes costaricensis f	Casiniroa edulis Cassia sophora Cedrela glaviovii puberula Cedrela montana mexicana Cestrum lanatum Cestrum macrophyllum Citrus aurantifolia Citrus limonia Citrus medica

January
June
August
Most important pest noted
on cotton

Insect and locality	C o l l e c t e d o n	Date and notes
Stenomacra marginella--Cont'd.	Citrus nobilis x C. paradi- si	Melanthera aspera
	Coix lacryma-jobi	Musa sapientum
	Coleus blumei	Oreopanax sp.
	Conostegia macrantha	Panicum barbinode
	Cornutia cymosa	Persea pittieri
	Cornutia pyramidata	Phoebe tonduzii
	Cucurbita pepo	Podocarpus sp.
	Dahlia rosea	Poinsettia pulcherrima
	Dillenia indica	Psidium guajava
	Eriobotrya japonica	Randia mitis
	Gossypium barbadense	Rumex crispus
	Guarea caoba	Sapium aucuparium
	Indigofera suffruticosa	Solanum tuberosum
	Inga roussoviana	Spondias cytherea
	Ipomoea purga	Tabebuia guayacan
	Lantana camara	Tabebuia pentaphylla
	Malus sylvestris	Tephrosia toxicaria
	Martinezia caryotaefolia	Trema micrantha
		Vitis rotundifolia
		Xanthosoma helleboriifol- ium
REDUVIIDAE		
Empicornis armatus Champ.?	Persea americana	June
San Pedro		
Sinea raptoraria Stål	Citharexylum caudatum	November
Paso Ancho		
SCUTELLARIDAE		
Pachycoris torridus (Scop.)	Cupressus benthami	January,
San Isidro de Coronado	Musa paradisiaca	June

Insect and locality	C o l l e c t e d o n		Date and notes
TINGIDIDAE			
<i>Corythaica planaris</i> Uhl. San Isidro del General	<i>Solanum torvum</i>		February, March
<i>Corythucha gossypii</i> (F.) San Isidro del General	<i>Annona muricata</i> <i>Artocarpus communis</i> <i>Blighia sapida</i> <i>Canavalia ensiformis</i>	f f f f	January, February, March, May, July, August
<i>Corythucha spinosa</i> (Duges) San Pedro	<i>Triumfetta josefina</i>	F	January, February, May, September
<i>Gargaphia patricia</i> (Stål) Alajuelita La Carpintera			February
<i>Leptobyrsa chiriquensis</i> Champ. Paso Ancho	<i>Citrus limonia</i>		September
<i>Leptopharsa tumida</i> Champ. Paso Ancho	<i>Malpighia glabra</i>	f	April, May, June, October, November, December
<i>Piesma cinerea</i> (Say) Torito	<i>Ipomoea</i> sp.		July
<i>Teleonemia sacchari</i> (F.) Orosi San Pedro	<i>Lantana camara</i>		February, September

HOMOPTERA

Insect and locality	Collected on	Date and notes
ALEYRODIDAE		
Aleurocanthus woglumi Ashby		
Orosi		
Waldeck		
Aleuroplatus oculirenfornis		
Quint. and Baker		
Paso Ancho		
Aleurothrixus howardi (Quint.)		
Alajuelita		
San Isidro del General		
San Josecito		
Annona reticulata	Fortunella japonica	Preyed on by
Annona squamosa	Lucuma mammosa	Pentilia discors
Citrus limetta	Rheedia edulis	Gorh.
Citrus paradisi	Trichilia havanensis	
Passiflora punctata		November
Blakea gracilis	Eugenia uniflora	Throughout the
Citrus limetta	Malpighia glabra	year. Preyed on
Citrus sinensis	Psidium guajava	by Pentilia dis-
Citharexylum caudatum	Spondias cytherea	cors

Insect and locality	C o l l e c t e d o n	Date and notes
Aleyrodicus coccolobae Quaint. and Baker San Jose San Pedro	Citrus aurantifolia Fortunella japonica f	June, October
APHIDIAE		
Aphis gossypii Glov. Paso Ancho San Jose	Gossypium barbadense f Hibiscus esculentus f	May, September, November. Preyed on by Neda retro- spiciens Cr.
Aphis illinoisensis Shim.	Vitis tiliaefolia	October to December
Aphis nerii Boyer. Orosi Paso Ancho		Preyed upon by Cycloneda san- guinea L.
Aphis pomi Deg. Paso Ancho San Rafael de Coronado		January to March, July to December. Tended by Solenopsis geminata F.
Aphis rumicis L.? San Pedro	Chrysanthemum maximum f Gerbera jamesoni	
Aphis spiraeicola Patch	Citrus sinensis f	
Ceratephus lataniae (Sdv.) Rio Grande	Epidendrum violaceum	March. Tended by S. geminata

Insect and locality	Collected on	Date and notes
<p><i>Eriosoma lanigerum</i> (Häusm.) San Isidro de Coronado San Jose de La Montana San Pedro</p>		<p>1,500 adults (<i>Aphelinus mali</i> Hald.) liberated.</p>
<p><i>Phopalosiphum pseudobrassicæ</i> (Davis) Orosi San Isidro de Coronado Santa Ana</p>		<p>January, July, November</p>
<p><i>Toxoptera aurantiæ</i> Boyer Santa Ana Santa Barbara de Heredia Terrazu</p>	<p><i>Citrus aurantium</i> f <i>Citrus limetta</i> f <i>Citrus medica</i> f</p>	<p>Preyed upon by <i>Coccinella emarginata</i>, <i>Cycloneda sanguinea</i> L., <i>Azya luteipes</i> Muls., <i>Pentilia discors</i></p>
<p>CERCOPIDÆ <i>Clastoptera funesta</i> Stål Orosi</p>	<p><i>Acnistus arborescens</i> <i>Dahlia</i> sp. (Catalina) <i>Hibiscus sabdariffa</i> <i>Impatiens sultani</i> <i>Iresine aspera</i> <i>Ixora chinensis</i> <i>Ocimum basilicum</i></p>	<p><i>Phaseolus vulgaris</i> <i>Psidium friedrichsthalianum</i> f <i>Rosmarinus officinalis</i> f <i>Russelia equisetiformis</i> f <i>Vigna sesquipedalis</i></p>
<p><i>Clastoptera obtusa</i> (Say) Paso Ancho</p>		<p>July, September</p>

Insect and locality	C o l l e c t e d o n	Date and notes
Epicranion championi Fowl. Paso Ancho	Citrus sinensis Conostegia lanceolata f Jasminum sambac	Persea americana f Polygonum punctatum f Sapium caudatum
Tomaspis bicincta (Say)	Asclepias curassavica Bidens pilosa Clerodendron fragans Cocos nucifera Coix mayuen Holcus sorghum	June, September.
Tomaspis bipunctata Say San Pedro	Polygonum punctatum	May
Tomaspis lineata (Walk.)? Sabanilla	"Espino"	October
Tomaspis postica (Walk.) Orosi Paso Ancho	Grass Hibiscus sabderiffa Musa sapientum	February, March, November
CHERMIDAE		
Freysuila ernstii Schwarz	Cedrela glaziovii pu- f berula	Injurious
Trioza nicaraguensis Crawl. San Pedro	Bryophyllum pinnatum Rumex crispus	January

Insect and locality	C o l l e c t i o n	Date and notes
CICADELLIDAE		
Agallia ingens Oman Paso Ancho	Impatiens balsamina Tetragonia expansa	Verbena sp. April, July, October
Agallia lingula Van D. Waldeck Turrialba	Acnistus arborescens Amaranthus cruentus Arachis hypogaea Cajanus bicolor Coix mayuen Cucumis sativus	Gerbera jamesoni Ipomoea batatas Linum usitatissimum Theobroma cacao Vernonia brachiata Viola sp. Throughout the year.
Agallia modesta O. and B. Chiz Alajuela Crosi Payas de Turrialba San Isidro de Coronado Santiago Turrialba	Apeiba tibourbon Asclepias curassavica Cajanus bicolor Cucurbita pepo Hamelia erecta Hibiscus sabdariffa Holcus sorghum Impatiens balsamina Impatiens sultani Inga roussoyana Lantana camara	Melastoma radiata Meibomia spp. Melanthera aspera Mentha sativa Panicum barbinode Panicum maximum Pelargonium zonale Radicula erioracia Tournefortia foetidissima Verbena spp. Vernonia brachiata
Agalliopsis novella tropicalis Van D. Paso Ancho San Isidro de Coronado	Artemisia absinthium Beta vulgaris crassa Cajanus bicolor Calyptranthes costaricensis Chrysanthemum maximum Crotalaria fulva Codium variegatum Cucurbita pepo Dahlia rosea Dombeya wallichii Ficus carica Fortunella japonica	Gerbera jamesoni Gross Hibiscus sabdariffa Impatiens sultani Indigofera suffruticosa Jacaranda ovalifolia Jatropha curcas Phaseolus helvolus f Saccharum officinarum Terminalia catappa f Tradescantia sp.
		Throughout the year

Insect and Locality	C o l l e c t e d o n	Date and notes
Agallia producta O. and B. Turrialba	Vernonia brachiata	February
Agallia repleta Van D. Paso Ancho	Coix lacryna-jobi Ficus cerica	July, September
Amblydisca gigas Fowl. Waldeck	Hura crepitans f	July
Aulacizes panamensis Fowl. Guadalupe Orosi	Annona cherinola Annona muricata Canangium odoratum Coffea arabica	March
Aulacizes thumbergii Stål San Pedro Tarrazu	Coffea arabica Coix mayuen f	August, September, December
Carneccephala sagittifera Uhl. San Rafael de Coronado	Canna indica Coffea arabica Digitalis sp. Linum usitatissimum	Throughout the year
Chinaia bella Bruner and Met. Waldeck	Theobroma cacao	January, July
Chlorotettix curvidens Osb. Waldeck	Zea mays	April

Insect and locality	C o l l e c t e d o n	Date and notes
Cicadella anita (Fowl.)	Heliconia imbricata	Abundant
Cicadella areolata (Sign.)	Acalypha wilkesiana	Hibiscus sabdariffa
Orosi	Ageratum conyzoides	Impatiens balsamina
Santa Ana	Althea rosea	Inga roussoviriana
Tarrazu	Beta vulgaris cicla	Ixophorus unisetus
Ujarras	Bidens pilosa	Lactuca sativa
	Byrsonima crassifolia	Linum usitatissimum
	Cajanus bicolor	Lippia berlandieri
	Canna indica	Meibomia sp.
	Carissa grandiflora	Mimosa sp.
	Citrus limonia	Musa sapientum
	Coffea arabica	Persea pittieri
	Croton gossypifolium	Phaseolus helvulus
	Cyperus alternifolius	Phoebe tonduzii
	Daucus carota	Psidium molle
	Eriobotrya japonica	Sesamum orientale
	Galinsoga hispidia	Solanum tuberosum
	Gossypium barbadense	Tetragonia expansa
	Helianthus annuus	Verbesina turbacensis
	Holcus vulgare	Xanthosoma helloboriifolium
	Hibiscus rosa-sinensis	Zacata carracillo
Cicadella coeruleovittata Sign.	Acanthus arborescens	Jussiaea decurrens
Juan Vinas	Beta vulgaris cicla	Leonurus sibiricus
La Carpintera	Ceiba pentandra	Meibomia spp.
Pavas de Turrialba	Chayote edulis	Melanthra aspera
Tarrazu	Cirsium costaricensis	Mentha sativa
	Citrus limonia	Petroselinum hortense
	Clerodendron fragrans	Polygonum punctatum
	Coffea arabica	Purca
	Coix mayuen	Tagetes patula
	Cucurbita pepo	Triticum aestivum
	Impatiens balsamina	Verbena spp.
	Ipomoea purga	Zea mays
	Ipomoea tiliacea	

Insect and locality	Collected on	Date and notes
Cicadella costaricensis (Dist.) San Isidro de Coronado	Rubus spp. (Blackberry)	August
Cicadella inuita (Fowl.) Carpintera San Isidro de Coronado San Pedro	Conostegia lanceolata Conostegia macrantha	January, February
Cicadella lativittata (Fowl.) Orosi San Isidro del General Turrialba	Anacardium occidentale Codiaeum variegatum Vernonia brachiata	February, March, November
Cicadella lutea (Sign.)	Acalypha wilkesiana	Hibiscus rosa-sinensis f
Cicadella mineaticeps (Fowl.) Guayabo San Isidro de Coronado San Isidro del General Santa Ana	Achillea sp. Anacardium occidentale f Apeiba tibouron Apium ermi Asclepias curassavica Beta vulgaris cicla Bidens pilosa Byrsonima crassifolia Cajanus bicolor	Callistephus chinensis Citrus medica Citrus sinensis Codiaeum variegatum Coix mayuen Congea velutina Coriandrum sativum Crotalaria fulva f Crotalaria striata

Insect and Locality	Collected on	Date and notes
Cicadella miniaticipes--Cont'd.		
Dahlia rosea	Meibomia sp.	f
Eugenia uniflora	Morus rubra	
Euphorbia hoffmaniana	Myosotis sylvatica	
Fragaria chiloensis	Papaver rhoeas	f
Gerbera jamesoni	Pennisetum purpureum	f
Heliotropium peruvianum	Phaseolus helvolus	f
Hibiscus sabdariffa	Phoenix canariensis	
Holcus halepensis	Raphanus sativus	
Impatiens balsamina	Rumex crispus	
Ipomoea tiliaefolia	Sesamum orientale	
Ixophorus unisetus	Tephrosia toxicaria	
Lactuca sativa	Tournefortia foetidissima	
Lilium longiflorum	Tragopogon porrifolius	
Mangifera indica	Verbena spp.	
Ageratum conyzoides	Lycopersicum esculentum	Throughout the year
Althaea rosea	Psidium molle	
Arachis hypogaea	Sporolobus indicus	
Brassica japonica		
Lantana camara		
Acalypha wilkesiana	Burchosia costaricensis	
Ageratum conyzoides	Byrsonima crassifolia	f
Althaea rosea	Cajanus bicolor	f
Anacardium occidentale	Canna indica	
Apeiba tibourbon	Ceiba pentandra	f
Apium annu	Cirsium costaricensis	
Artemisia absinthium	Citharexylum caudatum	
Asclepias curassavica	Coix lacryma-jobi	
Beta vulgaris cicla	Coix maquen	
Bidens pilosa	Cosmos bipinnatus	
Boreago officinalis	Cucurbita pepo	
Brassica oleracea	Cynara scolymus	f
Bryophyllum pinnatum	Datura stramonium	
Cicadella mollicella (Fowl.)		
Alajuela		
Orosi		
Paso Ancho		
San Pedro		
Cicadella occatoria (Say)		
Alajuelita		
Guadalupe		
La Carpintera		
Orosi		
San Isidro de Coronado		
San Isidro del General		
Tarrazu		
Tarrialba		
Tucurrique		
Ujarres		

Insect and locality	C o l l e c t e d o n	Date and notes
Cicadella occatoria (Say) --- Cont'd.	Duranta plumieri Erythrina rubrinervia Eugenia jambos Eugenia malaccensis Eugenia uniflora Galinzoza hispida Grevillea banksi Hedychium coronarium Helianthus annuus Hibiscus mutabilis Hibiscus soderiffa Hydnora courbaril Inga sp. Ipomoea purga Ixora chinensis Jacobinia coccinea Lactuca sativa Lantana trifolia Mangifera indica Meibomia spp. Melanthera aspera Mentha sativa Morus rubra	Mirabilis jalapa Petroselinum hortense f Phaseolus helvolus Psidium friedrichsthalianum Pyrus communis Raphanus sativus Rumex crispus Sambucus mexicana f Sedum sp. Sesuvium orientale Solanum lanceolatum sinuatum Spondias purpurea Tephrosia toxicaria Theobroma cacao Thubergia grandiflora Tournefortia foetidissima Triumfetta josefina f Verbena spp. Vernonia brachiata f Vitis vinifera Xylocopa sp. Yucca elephantipes Zantedeschia aethiopica
Cicadella pardalina (Fowl.) San Jose	Althaea rosea Calliandra grandiflora Citrus medica Cydonia oblonga Diospyros virginiana Dovyalis hebecarpa Eucalyptus alba	Eucalyptus trachyphloia f Fortunella japonica f Grevillea robusta f Guarea caoba f Plumeria rubra Terminalia catappa f
Cicadella pulchella (Guer.) Alajuelita Cachi Cartago	Ageratum conyzoides Beta vulgaris crassa Bidens pilosa	Daucus carota Fragaria chiloensis Galinzoza hispida

Insect and locality	C o l l e c t e d o n		Date and notes
Cicadella pulchella (Guer.)-- Cont'd.	Jussiaea decurrens Mimosa asperata Petroselinum hortense f Phaseolus helvolus	Polygonum punctatum Solanum tuberosum Valerianoides cayennense f Verbena spp.	September
Cicadella quadriplagiata (Walk.) Santa Barbara de Heredia Tarrazu	Coffea arabica		
Cicadella reservata (Fowl.) Alajuelita	Antigonon leptopus Blakea gracilis Cajanus bicolor Cassia alata Citrus limonia Dovyalis hebecarpa Eriobotrya japonica Ficus carica Gardenia jasminoides Gossypium barbadense Hedychium coronarium Hibiscus esculentus	Hibiscus sabdariffa f Hyptis suaveolens Ixora chinensis Sylvestris malus Phaseolus helvolus Psidium friedrichsthalianum Psidium guajava Rosa spp. Salvia hispanica Trichilia havanensis Zinnia elegans	October
Cicadella similis (Walk.) Alajuelita Guadalupe Guayabo Pavas de Turrialba San Isidoro de Coronado San Isidro del General Santa Barbara de Heredia Waldeck	Ageratum conyzoides Apeiba tibourbon Arachis hypogaea Boehmeria nivea Borago officinalis Bryophyllum pinnatum Celosia cristata Coix mayuen Crotalaria striata Elaeis guineensis Guilielma utilis Heliotropium peruvianum	Hibiscus sabdariffa Impatiens balsamina Ixophorus unisetus Jussiaea decurrens Linum usitatissimum Lycopersicum esculentum Meibomia sp. Melanthera aspera Mentha sativa Nicotiana tabacum Pelargonium zonale Pennisetum purpureum f	Throughout the year

Insect and locality	C o l l e c t e d o n		Date and notes
Cicadella similis--Cont'd.	Persea americana Petroselinum hortense Philadelphus trichapetalus Plantago major Polygonum punctatum Solanum nigrum	Sporolobus indicus Tragopogon porrifolius f Tripasium latifolium Triticum aestivum f Zea mays f	Throughout the year
Cicadella sociata (Fowl.) Turrialba	Vernonia brachiata		February Abundant
Cicadella testudinaria (Fowl.) San Isidro del General Santa Barbara de Heredia Garrazu	Acnistatus arborescens Alnus acuminata f Anacardium occidentale f Eyrsonima crassifolia Cajanus bicolor Canna indica Cassia spectabilis Chalcas exotica Cosmos sulphureus Croton gossypifolium Crotalaria striata Dahlia rosea Eugenia malaccensis Gardenia jasminoides f Heliotropium peruvianum Hibiscus abelmoschus	Hibiscus esculentus f Ixora chinensis Leonurus sibiricus Ligustrum japonicum Malpighia glabra Mycotis sylvatica Poinsettia pulcherrima Psidium cattleianum Psidium freidrichsthalianum f Pyrus communis Serjania sp. Schinus molle Solanum nigrum Terminalia catappa Vinca rosea Zinnia elegans	Throughout the year
Cicadula maidis DeLong and Wolcott San Isidro del General	Coix mayuen Ficus carica Phaseolus vulgaris	f	March

Insect and locality	C o l l e c t e d o n	Date and notes
CyrtoDISCA major (Sign.) Tarrazu	Coffea arabica	August
DeltOCEPHALUS flavicoSTA Stål	Coix mayuen Fragaria chiloensis	August
Diedrocephala limbaticollis (Stål) Guadalupe Paso Ancho San Pedro	Acnistus arborescens Bidens pilosa Canangium odoratum Cestrum lanatum Chayota edulis Citrus limonia Codiaeum variegatum Conostegia lanceolata Cornutia pyramidata Croton gossypifolium Cucurbita pepo Erythrina rubrinervia Gossypium barbadense	Throughout the year
Diedrocephala sanguinolenta (Coqueb.)	Coix lacryma-jobi	Inga sp.
Diedrocephala satella (Fowl.)	Ipomoea purga	Tabernaemontana bignoniace- flora
Diestostemma ruforeticulatum Schmidt Guadalupe Paso Ancho Santa Barbara	Citrus limonia Coffea arabica	January July to December Causes tip-wilt of coffee
	f	Hibiscus rosa-sinensis Inga roussoViana f Sterculia diversifolia

Insect and locality	C o l l e c t e d o n	Date and notes
Diestostemma schmidti Mel. Alajuela Paso Ancho San Pedro	Anacardium occidentale f Eriobotrya japonica Pelargonium zonale Terminalia catappa	March, July, October to December
Draeculacephala lenticula Ball La Gloria	Bidens pilosa Coix mayuen Panicum maximum Pennisetum purpureum f	June to October
Draeculacephala soluta Gibs. Guadalupe Paso Ancho Santa Ana	Coix mayuen Holcus sorghum Impatiens balsamina Sporolobus indicus	July to December
Empoasca perelegans Oman	Annona squamosa Sapium aucuparium	June, July
Erythroneura elegantula Ost.? San Pedro	Vernonia brachiata f	January, February, April, July

Insect and locality	C o l l e c t e d o n	Date and notes
Exitianus picatus (Gibs.) Pavas de Turrialba San Isidro de Coronado	Artemisia absinthium Coix mayuen Cyclanthera pedata Fragaria chiloensis f	Hibiscus sabdariffa Solanum tuberosum Tetragonia expansa Viola sp. August to November
Graphocephala aurolineata (Fowl.) San Pedro	Bidens pilosa	August
Graphocephala coccinea (Forst.) Alajuelita San Isidro de Coronado Santa Ana	Acalypha wilkesiana Ananethus cruentus Amygdalus davidiana Anacardium occidentale Artemisia absinthium Averrhoa carambola Bauhinia monandra Bauhinia violacea Bixa orellana Eyrsonima crassifolia Cajanus bicolor Callistemon lanceolatus Canavalia ensiformis Carissa grandiflora Cedrela glaziovii puberula Citharexylum caudatum Citrus aurantifolia	Citrus medica Codiaeum gossypifolium Crotalaria striata Dillenia indica Dombeya wallichii Dovyalis hebecarpa Eriobotrya japonica Erythrina rubrinervia Eucalyptus trachyphoia Eugenia malaccensis Euphorbia hoffmaniana Gossypium barbadense Hibiscus esculentus Hibiscus sabdariffa Holmskjoldia sanguinea Ipomoea tiliacea Jasminum sambac f f Throughout the year

Insect and locality	C o l l e c t e d o n	Date and notes
Graphocephala coccinea--Cont'd.	<p>Jasminum simplicifolium f</p> <p>Jatropha curcas f</p> <p>Lagerstroemia indica f</p> <p>Lucuma mammosum</p> <p>Malpighia glabra</p> <p>Morus rubra</p> <p>Creopanax sp.</p> <p>Passiflora edulis</p> <p>Poinsettia pulcherrima</p> <p>Psidium guajava f</p>	Throughout the year
Graphocephala obtusior (Fowl.) San Rafael de Coronado	Malus silvestris	February
Graphocephala pileata (Fowl.) San Isidro del General	"Purra"	February
Graphocephala propior (Fowl.) San Isidro del General	Cajanus bicolor Hamelia erecta	February, March
Graphocephala rufimargo (Walk.) San Isidro del General San Pedro San Rafael de Coronado Turrialba Waldeck	<p>Coreopsis lanceolata</p> <p>Hamelia erecta</p> <p>Malus sylvestris</p> <p>Pyrus communis</p> <p>Rumex crispus</p> <p>Spondias purpurea</p>	July
	Vernonia brachiata	
	Vernonia brachiata	
	<p>Rumex crispus</p> <p>Sapium aucuparium</p> <p>Sapium caudatum</p> <p>Solanum tuberosum</p> <p>Spondias mombin</p> <p>Spondias purpurea</p> <p>Tabebuia guayacan</p> <p>Tephrosia toxicaria</p> <p>Vitis vinifera</p> <p>Zinnia elegans</p>	

Insect and locality	C o l l e c t e d o n	Date and notes
Graphocephala sexlineata (Sign.)	Acalypha wilkesiana	Hibiscus sabdariffa f
Paso Ancho	Acnistus arborescens	Jasminum sambac
San Isidro de Coronado	Aleurites moluccana	Jasminum simplicifolium f
San Isidro del General	Althaea rosea	Lagenaria leucantha f
	Amaranthus cruentus	Leonurus sibiricus
	Anacardium occidentale	Mangifera indica
	Apeiba tibourbon	Mimusops balata
	Beta vulgaris	Oreopanax sp. f
	Cassia sophora	Persea americana
	Ceiba pentandra	Phaseolus lunatus
	Clerodendron fragrans	Phenax mexicanus f
	Crotalaria spectabilis	Rumex crispus f
	Dahlia sp. (Catalina)	Solanum lanceolatum
	Dombeya wallichii	sinuatum f
	Eriobotrya japonica	Solanum torvum
	Erythrina rubrinervia	Tabebuia guayacan
	Gomphrena globosa	Tabernaemontana bignoniace- flora
	Gossypium barbadense	Tephrosia toxicaria
	Helianthus annuus	Tabebuia pentaphylla
	Heliotropium peruvianum	Verbesina turbacensis f

Insect and locality	C o l l e c t e d o n	Date and notes
Graphocephala versuta (Say) Alajuela Tarrazu	Anacardium rhinocarpus Bauhinia monandra Bauhinia purpurea Calyptranthes costaricensis f Cassia alata Citharexylum caudatum Citrus aurantifolia Eriobotrya japonica f Erythrina rubrinervia Gardenia jasminoides Hamelia erecta Impatiens balsamina	Greopanax sp. Pelargonium zonale Persea americana Rosmarinus officinalis Sambucus mexicanus f Saccharum officinarum Spondias purpurea Terminalia catappa f Trichilia havanensis Vernonia brachiata Xanthosoma sagittifolium Yucca elephantipes
Gypona praeterita Fowl. Alajuelita	Psidium guajava Solanum lanceolatum sinuatum	January
Gypona puncticollis Spangb.	Ocimum basilicum	January
Gypona signoreti Stål	Hibiscus rosa-sinensis Lantana camara	September, December
Gypona vinula Stål Tarrazu	Ageratum conyzoides Coffea arabica	June, October

Insect and locality	Collected on	Date and notes
<i>Gyrona vulnerata</i> Walk. Alajuela Guadalupe San Jose	<i>Acalypha wilkesiana</i> <i>Anacardium rhinocarpus</i> <i>Annona squamosa</i> <i>Apeiba tibourbon</i> <i>Cajanus bicolor</i> <i>Cydonia oblonga</i> <i>Eugenia malaccensis</i> <i>Gossypium</i> sp. <i>Helianthus annuus</i> <i>Hymenaea courbaril</i>	<i>Inga roussoiana</i> <i>Persea pittieri</i> <i>Phaseolus vulgaris</i> <i>Psidium molle</i> <i>Rubus</i> sp. (Blackberry) <i>Solanum lanceolatum sinuatum</i> <i>Solanum tuberosum</i> <i>Vernonia brachiata</i>
<i>Homalodisca triquetra</i> (F.) Santa Ana	<i>Calliandra grandiflora</i> <i>Citrus aurantifolia</i>	<i>Citrus aurantium</i> <i>Kimosa asperata</i>
<i>Kolla fasciata</i> (Walk.) Alajuelita Paso Ancho	<i>Byrsonima crassifolia</i> <i>Calonyction aculeatum</i> <i>Canna indica</i> <i>Clerodendron fragrans</i> <i>Crotalaria striata</i>	<i>Hibiscus sabdariffa</i> <i>Linum usitatissimum</i> <i>Ocimum basilicum</i> <i>Phytolacca octandra</i> <i>Polygonum punctatum</i>
<i>Kolla geometrica</i> (Sign.) Orosi Tarrazu	<i>Apeiba tibourbon</i> <i>Bocconia frutescens</i>	<i>Coffea arabica</i> <i>Eugenia malaccensis</i>
<i>Neonirvana hyalina</i> Oman Paso Ancho San Pedro	<i>Annona cherimola</i> <i>Citharexylum caudatum</i> <i>Cornutia pyramidata</i> <i>Hamelia erecta</i>	<i>Hibiscus rosa-sinensis</i> <i>Passiflora ligularis</i> <i>Tournefortia foetidissima</i> <i>Trichillia havanensis</i>
<i>Oncometopia anceps</i> Fowl. Waldeck	<i>Paspalum fasciculatum</i>	
<i>Oncometopia obtusa</i> (F.) ? Guadalupe Paso Ancho San Isidro de Coronado San Jose San Pedro Tarrazu	<i>Acalypha wilkesiana</i> <i>Althaea rosea</i> <i>Annona cherimola</i> <i>Bauhinia monandra</i> <i>Byrsonima crassifolia</i> <i>Cajanus bicolor</i> <i>Callistemon lanceolatus</i>	<i>Calyptranthes costaricensis</i> <i>Canarium odoratum</i> <i>Carissa grandiflora</i> <i>Citrus aurantifolia</i> <i>Citrus limonia</i> <i>Citrus paradisi</i> <i>Citrus sinensis</i>
		Throughout the year
		July
		February, March, September
		January, February, June to August, November
		July
		Throughout the year

Insect and locality	C o l l e c t e d o n	Date and notes
Osbornellus mexicanus Obs. San Isidro de Coronado	<p>Acnistus arborescens Bixa orellana Cestrum macrophyllum Cestrum lanatum Citrus nobilis x C. para- disi Conostegia lanceolata Dahlia sp. Datura stramonium Hemelia erecta Mirabilis jalapa</p>	<p>Inga roussoviaana Iresine herbsti Mornodes sp. f Psidium guajava f Prunus cerasifera pissardi f Rheum rhaponticum Solanum tuberosum Ternanthera ficoides Trichilia havenensis Zea mays</p>
Parallaxis calthrata McA. Paso Ancho	<p>Mirabilis jalapa Coix mayuen Panicum barbinode</p>	<p>October Pennisetum purpureum f</p>
Phera obtusifrons Fowl. Paso Ancho	<p>Amaranthus spinosus Bauhinia monandra Bidens pilosa Elaeoa gracilis Elighia sapida Borago officinalis Buddleia davidi Bryophyllum pinnatum Byrsonima crassifolia Cajanus bicolor Chrysanthemum sp. Citrus aurantium Citrus limonia Clitoria ternatea Codiaeum variegatum</p>	<p>Coffea arabica f Coix mayuen f Coleus blumei f Conostegia lanceolata Cornutia pyramidata Crotalaria fulva Crotalaria striata Dovyalis hebecarpa Erythrina rubrinervia f Eugenia malaccensis f Grass Guilielma utilis Helianthus annuus Heliotropium peruvianum</p>
Platymetopius frontalis Vand. Alajuelita Pavas de Turrialba San Isidro de Coronado		

Insect and locality	Collected on	Date and notes
Platymetopius frontalis-- Cont'd.	Hibiscus sabdariffa Inga roussovia Indigofera suffruticosa Leonurus sibericus Mangifera indica Myrsotis sylvatica Nicotiana tabacum Ocimum basilicum Persea pitteri	Phaseolus helvolus Phytolacca octandra Podocarpus sp. Salvia hispanica Salvia splendens Spondias purpurea Vigna sesquipedalis Vigna rosea Vitis vinifera
Protalebra decorata (Osb.) Paso Ancho	Inga roussovia	February to September
Protalebra signata McA. San Pedro	Tabebuia pentaphylla	April, August. Abundant
Spangbergiella mexicana Bak. Santa Ana	Ipomoea sp.	July
Stirellus bicolor (Van D.) Pavas de Turrialba	Grass	February
Thamnotettix comatus (Ball) Alajuela Alajuelita Pavas de Turrialba San Isidro de Coronado San Pedro de Barba	Clerodendron fragrans Eriobotrya japonica Grass Panicum barbinode Vernonia brachiata	March July, September
Thamnotettix fasciaticollis (Stal) Paso Ancho San Isidro de Coronado Santa Barbara de Heredia	Amaranthus cruentus Bauhinia monandra Brassica oleracea acephala Byrsonima crassifolia Calyptanthus costaricensis Citrus sinensis Colocasia esculenta Cupressus benthami Dahlia sp. (Catalina)	Throughout the year.
	Fortunella japonica Impatiens balsamina Oreopanax sp. Passiflora ligularis Persea pitteri Raphanus sativus Solanum unbellatum Pyrus communis Thunbergia grandiflora Zen mays	

Insect and locality	C o l l e c t e d o n	Date and notes
Typhlocybella minima Bek. Paso Ancho	Grass	September
Xestocephalus tessellatus Van D. Paso Ancho Waldeck	Linum usitatissimum Theobroma cacao	July
CICADIDAE Fidicina pronoe (Walk.) San Isidro del General	Erythrina rubrinervia Gliricidia maculata	February. Abundant
Quesada gigas (Oliv.) San Isidro del General	Cassia spectabilis Gliricidia maculata	February

Insect and locality	C o l l e c t e d o n	Date and notes
COCCIDAE		
Aspidiotus destructor Sign. Limon Waldeck	Cocos nucifera Elaeis guineensis Pandanus utilis	f f f July, September
Aulacaspis pentagona (Targ.) Guadalupe	Amygdalus davidiana Hibiscus rose-sinensis	f f
Aulacaspis rosae (Bouche) Paso Ancho San Jose	Epidendrum spp. Rosa spp.	March, May, July, September
Ceroplastes floridensis Comst. Alajuelita Paso Ancho San Isidro de Coronado	Antigonon leptopus Citrus paradisi Eugenia uniflora Gardenia jasminoides Lagerstroemia speciosa	f f f f f f
Chrysomphalus dictyospermi (Morg.)	Amygdalus persica Cinnamomum camphora	f January
Coccus acuminatus (Sign.) Desamparados de Alajuela	Gardenia jasminoides Gonolobus edulis	f f February to August
Coccus hesperidum L. Ochomogo Santa Ana	Blighia sapida Citrus aurantium Clusea sp. Codiaeum variegatum Dianthus barbatus Eugenia malaccensis Gardenia jasminoides	f f f f f f f f May to September. Tended by Solenopsis geminata.

Insect and locality	C o l l e c t e d o n	Date and note
Coccus viridis (Green)	Coffea arabica	f February
Florinia fioriniae (Targ.- Tozz.) San Jose	Cocos nucifera	f
Hemichionaspis aspidistreae (Sign.) Guadalupe Limon Ochonogo Paraíso de Cartago San Isidro de Coronado San Jose		January, February, September
Icerya montserratensis Riley and Howard	Jacaranda ovalifolia	f Malus sylvestris
Ischnaspis longirostris (Sign.) Guadalupe San Jose	Asparagus sprengeri Chamaedorea bifurcata Cocos nucifera	February, March, June
Lepidosaphes beckii (Newm.) San Isidro del General	Citrus limetta	f
Orthezia insignis Dougl. San Rafael de Coronado	Cestrum nocturnum Chrysanthemum sp. Clerodendron thomsonae Eugenia jambos Fragaria sp. Gardenia jasminoides Gonolobus edulis Iresine herbsti	Throughout the year f f f f f
	Jacobinia aurea Lantana camara Lippia berlandieri Mentha sativa Pandia mitis Rosmarinus officinalis Russelia equisetifolius	

Insect and locality	C o l l e c t e d o n	Date and notes
Protopulvinaria pyriformis Ckll. Paso Ancho San Pedro	Eugenia malaccensis f Psidium friedrichsthalianum f	July, September, October, December
Pseudaonidia articulatus Morg. Paso Ancho	Citrus limonia Coffea arabica f f	April, May, September, October
Pseudischnaspis bowreyi (Ckll.) San Jose	Jasminum sambac f Tabernaemontana coronaria f	
Pseudococcus citri (Risso) Paso Ancho Tarrazu	Sambucus mexicanus f Lagenaria leucantha f	July
Pseudococcus longispinus (Targ.) Limon	Caladium bicolor	September
Pseudococcus virgatus (Ckll.) Paso Ancho San Jose	Bauhinia violacea Blakea gracilis f Byrsonima crassifolia f	January, February, May, June, August, October
Pulvinaria psidii Mask. Paso Ancho	Eugenia uniflora Psidium guajava Serjania sp. f Gonolobus edulis f Iresine herbsti f Ixora chinensis f Rheedia sp. f Viola odorata f	Preyed on by Azya luteipes. Tended by Solenopsis geminata.
Rhizococcus coffeae Iaing Guadalupe		May

Insect and locality	C o l l e c t e d o n	Date and notes
<i>Saissetia hemisphaerica</i> (Targ.) Ochomogo Sabanilla San Isidro del General San Jose	<i>Acnistus arborescens</i> <i>Antigonon leptopus</i> <i>Asparagus sprengeri</i> <i>Blighia sapida</i> <i>Calypttranthes costaricensis</i> <i>Chalcas exotica</i> <i>Chrysophyllum cainito</i> <i>Citrus limetta</i> <i>Citrus paradisi</i> <i>Clerodendron fragrans</i> <i>Coleus blumei</i> <i>Colocasia esculenta</i> <i>Dahlia rosea</i> <i>Impatiens balsamina</i> <i>Impatiens sultani</i>	Tended by <i>Solenopsis geminata</i> , and <i>Rhipipteryx biolleyi</i> Sauss.
<i>Saissetia nigra</i> (Nietn.) Paso Ancho	f <i>Iresine herbsti</i> f <i>Lantana trifolia</i> F <i>Lucuma mammosa</i> f <i>Malus sylvestris</i> f <i>Miltonia andresii</i> f <i>Persea pittieri</i> F <i>Prunus salicina</i> f <i>Psidium friedrichsthalianum</i> f <i>Punica granatum</i> f <i>Sanchezia nobilis</i> f <i>Spondias mombin</i> f <i>Spondias purpurea</i> f <i>Tabernaemontana bignoniiflora</i> f <i>Tournefortia foetidissima</i> f <i>Zinnia elegans</i>	December
<i>Saissetia oleae</i> (Bern.)	f <i>Ocimum basilicum</i> f <i>Annona cherimola</i> f <i>Annona muricata</i> f <i>Antigonon leptopus</i> f <i>Citrus limetta</i> f <i>Erythrina rubrinervia</i>	Throughout the year. Tended by <i>Solenopsis geminata</i> .
<i>Trionymus sacchari</i> Ckll. Santa Barbara de Heredia	f <i>Eugenia malaccensis</i> f <i>Ficus carica</i> f <i>Malus sylvestris</i> f <i>Punica granatum</i>	August
FULGORIDAE <i>Anotia invalida</i> Fowl. Waldeck	<i>Theobroma cacao</i>	April, July Abundant
<i>Coix lacryma-jobi</i> <i>Paspalum fasciculatum</i>		

Insect and locality	C o l l e c t e d o n	Date and notes
Biolleyana costalis Fowl. Waldeck	Theobroma cacao	April, July
Bladina magnifrons Walk. Waldeck	Panicum barbinode	April, July. Abundant
Bothriocera tinealis Klug. Pavas de Turrialba San Isidro del General Turrialba Waldeck	Codiaeum variegatum Coix lacryma-jobi Cornutia pyramidata Grass Impatiens balsamina	February, July
Colgorina proxima (Fowl.) Waldeck	Citharexylum caudatum Coffea arabica	April, September
Copicerus irroratus Swartz Orosi	Cupressus benthami Ipomoea purga Ipomoea tiliacea Lantana camara	February, July October
Delphacodes nigrifacies Muir. Waldeck	Grass	January
Delphacodes propinqua Fieb. Paso Ancho Pavas de Turrialba	Grass	March
Delphacodes teapae (Fowl.) Paso Ancho	Phaseolus vulgaris	September, December

Insect and locality	C o l l e c t e d o n	Date and notes
Dictyophara florens (Stål) Santa Ana	Leonurus sibericus	Ricinus communis July
Dictyophara herbida (Walk.) Paso Ancho Santa Ana Waldeck	Achyranthes aspera Gliricidia maculata Inga roussoviaana Panicum barbinode	Poinsettia pulcherrima Psidium guajava Theobroma cacao Vernonia brachiata July, September, December
Dictyophara obtusifrons (Walk.) Paso Ancho San Pedro	Casuarina equisetifolia Cleome spinosa Coix mayuen Hibiscus sabdariffa	Poinsettia pulcherrima Sapium caudatum Trichilia havanensis July, November, December
Enchophora florens Dist. Santa Ana	Bunchosia costaricensis	July
Flatoides humeralis Walk. Paso Ancho	Amygdalus persica Casimiroa edulis Citrus sinensis	March, June
Oecleus addendus Fowl. Pavas de Turrialba Waldeck	Elaeis guineensis Grass	February, July
Peregrinus maidis (Ashm.) Paso Ancho Waldeck	Coix mayuen	April, October, November
Sogata furcifera Horv. Pavas de Turrialba	Grass Triticum aestivum	February, December

Insect and locality	C o l l e c t e d o n	Date and notes
Syntames chiriquensis Fowl. San Isidro del General	"Purra"	February
Thionia variegata Stål San Pedro	Erythrina rubrinervia	September, October
MEMBRACIDAE		
Aconophora pallescens Stål	Annona muricata	
Alajuelita	Cajanus bicolor	
Guadalupe	Cassia reticulata	f f
Navarro	Citharexylum caudatum	f f
San Isidro de Coronado	Elaphrium simaruba	
San Jose		
Santa Ana		
	Jatropha aconitifolia	
	Eucalyptus trachyphoia	
	Lucuma mammosa	
	Prunus armeniaca	
	Vernonia brachiata	

Insect and locality	C o l l e c t e d o n	Date and notes
Acutalis fusconervosa Fairm. Santa Elena de Tarrazu	Coffea arabica	January
Aethalion quadratum Fowl. Paso Ancho	Canangium odoratum f Sida rhombifolia	November, December
Aethalion reticulatum (L.) Alajuelita Paso Ancho San Isidro de Coronado	Bombacopsis fendleri f Codiaeum variegatum Elaeagnus umbellata Elaphrium simaruba f Erythrina crista-galli Erythrina rubrinefvia	Throughout the year f f f
Alchisme grossa (Fairm.) La Carpintera San Isidro de Coronado	Acnistus arborescens f Cestrum aurantiacum f Cestrum lanatum f	January, February, November, Decem- ber
Amastris obtegens (F.)		April
Antianthe expansa (Germ.) Alajuelita Desemparados de Alajuela La Carpintera San Isidro de Coronado San Jose San Rafael de Coronado Santa Rosa Tarrazu	Cestrum nocturnum f	Tended by Solano- pis geminata and Parachartergus apicalis (F.)

Insect and locality	C o l l e c t e d o n	Date and notes
Bolbonota inaequalis (Fairm.) Alajuelita	<i>Annona cherimola</i> <i>Baccharis nervosa</i> <i>Bauhinia violacea</i> <i>Cestrum aurantiacum</i> <i>Citrus limetta</i> <i>Coix lacryma-jobi</i> <i>Cola acuminata</i> <i>Cydonia oblonga</i> <i>Eucalyptus trachyphoia</i> <i>Eugenia malaccensis</i>	<i>Inga roussovia</i> <i>Psidium friedrichsthalianum</i> <i>Spondias purpurea</i> <i>Terminalia catappa</i> <i>Thevetia nerifolia</i> f <i>Tournefortia foetidissima</i> <i>Trema micrantha</i> <i>Xylosma</i> sp.
Bolbonota inconspicua Fowl. Orosi Paso Ancho San Pedro	<i>Acnistus arborescens</i> <i>Cassia</i> sp. near <i>alata</i> <i>Inga roussovia</i> <i>Ixora chinensis</i>	<i>Malpighia glabra</i> <i>Mangifera indica</i> <i>Psidium friedrichsthalianum</i>
Bolbonota insignis Fowl. Guadalupe La Carpintera Orosi San Isidro del General Waldeck	<i>Anacardium rhinocarpus</i> <i>Annona squamosa</i> <i>Baccharis nervosa</i> <i>Blighia sapida</i> <i>Byrsonina crassifolia</i> <i>Cajanus bicolor</i> <i>Cassia alata</i> <i>Cassia reticulata</i> <i>Citrus medica</i> <i>Clerodendron fragrans</i> <i>Elaphrium sinaruba</i> <i>Erythrina rubrinervia</i> <i>Ficus carica</i> <i>Gardenia jasminoides</i> <i>Helianthus annuus</i> <i>Hibiscus rosa-sinensis</i> <i>Hibiscus sabdariffa</i>	<i>Hymenaea courbaril</i> <i>Inga</i> sp. <i>Inga roussovia</i> <i>Lucuma salecefolia</i> f <i>Piper</i> spp. <i>Poinciana regia</i> <i>Psidium guajava</i> <i>Rosa</i> spp. f <i>Rubus</i> spp. (Blackberry) <i>Rumex crispus</i> <i>Solanum umbellatum</i> <i>Spondias cytheria</i> <i>Spondias mombin</i> <i>Tephrosia toxicaria</i> f <i>Theobroma cacao</i> <i>Verbesina turbacensis</i>

Insect and locality	Collected on		Date and notes
Enchenopa lanceolata (Stoll) Guadalupe Peralta San Isidro de Coronado San Isidro del General	Antigonon leptopus Byrsonima crassifolia Calyptanthus costaricensis f Canarium odoratum	Citrus sinensis Grevillea robusta Solanum seaforthianum Tephrosia toxicaria Zexmenia costaricensis f	Throughout the year
Endoophyllum dubium Fowl. Paso Ancho	Citrus sinensis Inga leptolaba	Inga roussoviana Malpighia glabra	March, November, December
Entylia sinuata (F.) San Isidro de Coronado San Isidro del General Santa Ana	Artemisia absinthium f Bunchosia costaricensis Byrsonima crassifolia Cajanus bicolor Coix mayuen Cosmos bipinnatus Crotalaria striata Eriobotrya japonica Ficus carica Ficus religiosa f	Helianthus annuus Hibiscus sabdariffa Inga roussoviana Melanthera asperata Polygonum punctatum Psidium guajava Ricinus communis Solanum tuberosum Vitis vinifera Zea mays	Throughout the year
Erechtia sallaei (Fowl.) Paso Ancho	Eugenia jambos Hanelia erecta Hymenaea courbaril	Mangifera indica Rosa spp.	Throughout the year. Tended by Parachartergus apicalis
Heteronotus nodosus (Germ.) Paso Ancho San Pedro	Hymenaea courbaril Inga leptolaba	Inga roussoviana	January, December

Date and notes

Horiola picta (Coqueb.)	Cornutia pyramidata	April
Eysenhardtia coronata (F.) San Pedro	Byrsonima crassifolia	July
Ischnocentrus niger Stål Peralta	Mistletoe	July
Lycoderes phasianus Fowl. San Isidro del General	"Purra"	February
Membracis humilis Fowl. Orosi	Grevillea robusta	November
Membracis mexicana Guer. Orosi	Annona squamosa	Tended by Solen-
San Isidro de Coronado	Antigonon leptopus	opsis geminata
San Isidro del General	Bauhinia purpurea	
San Jose	Bixa orellana	
Santa Barbara de Mercedia	Cajanus bicolor	f
	Cassia alata	f
	Cassia sophora	f
	Cassia spectabilis	f
	Cinnamomum camphora	
	Cornutia pyramidata	
	Dialysa robinoides	f
	Dombeya wallichi	
	Elaeagnus umbellata	
	Elephrium sinaruba	f
	Eugenia jambos	f
	Byrsonima crassifolia f	

Insect and locality	C o l l e c t e d o n	Date and notes
Micrutalis ephippium (Burm.) La Gloria Peralta San Isidro del General	Acnistus arborescens Annona muricata Apeiba tibourbon Capsicum annuum	Chenopodium ambrosioides f Panicum maximum
Micrutalis lugubrina (Stål)	Conostegia macrantha Guarea caoba	Tournefortia foetidissima Vernonia brachiata
Polyglypta costata Burm. Paso Ancho San Pedro	Annona cherimola f Passiflora ligularis Verbesina turbacensis	Vernonia brachiata
Polyglypta dispar Fowl. La Carpintera	"Purca"	February
Potnia brevicornis Fowl. La Carpintera Paso Ancho	Philadelphus trichopetalus Tournefortia foetidissima	January, February, April, June.. Tended by Para- chartergus apicalis
Pterygia bituberculata Fowl. Paso Ancho Santa Ana	Eriobotrya japonica Eugenia jambos Serjania sp.	July, November, December
Pterygia cerviceps Fowl. Waldeck	Theobroma cacao	April
Spongophorus ballista (Germ.) Peralta Santa Ana	Acnistus arborescens Annona cherimola Antigonon leptopus Bauhinia monandra Bauhinia violacea Capsicum annuum Cosmos sulphureus	Throughout the year f f f f f f f

Insect and locality	C o l l e c t e d o n		Date and notes
Stictocephala festina (Say) Alajuelita San Isidro de Coronado San Isidro del General	Borago officinalis Cajanus bicolor Crotalaria fulva Crotalaria retusa Crotalaria striata Helianthus annuus Hibiscus sabdariffa	f f f f f f f	Throughout the year
Stictopelta acutula (Wirm.)? San Isidro del General San Pedro	Annona muricata		April, July
Tylopelta gibbera (Stål) Paso Ancho San Pedro Ujaras	Meibomia sp. Phaseolus vulgaris	f f	January, February, June, October, December
Umbonia crassicornis (Am. & Serv.) Santa Ana	Acacia costaricensis Acacia farnesiana Cajanus bicolor Cassia sopora	f f f f	June, September to December
Vanduzeeae segmentata (Fowl.)	Acacia farnesiana Cajanus bicolor Calyptanthus costaricensis Cassia alata Cassia grandis	f f f f f	January, November, December, Tended by Solenopsis geminata

Insect and locality	Collected on	Date and notes
LEPIDOPTERA		
<i>Acraga coa</i> Schaus Guadalupe	<i>Coffea arabica</i> f	June
<i>Agraulis juno</i> (Cr.) San Isidro del General	<i>Zinnia elegans</i> f	February, June
<i>Agraulis poeyi</i> Butl. San Pedro	<i>Passiflora quadrangularis</i>	February. Preyed on by <i>Podisus congrex</i> Stal
<i>Anastus azenia</i> H.-S. San Pedro	<i>Ligustrum japonicum</i>	January, March, April
<i>Aprotopos melantio</i> (Bates) Guadalupe Santa Ana		June, July
<i>Aprotopos chiriouensis</i> Champ. San Pedro Santa Barbara de Heredia	<i>Diospyros virginiana</i> <i>Persea americana</i> <i>Zea mays</i>	May, June, August
<i>Atarnes sallaei</i> (Feld.) San Pedro	<i>Annona cherimola</i> <i>Annona reticulata</i>	June, July, September, October
<i>Automeris boucardi</i> Druce	<i>Annona cherimola</i> <i>Canna indica</i> <i>Cydonia oblonga</i>	f April, June, December f f
<i>Automeris rubescens</i> Walk. Paso Ancho	<i>Croton gossypifolium</i>	November
<i>Automeris tricolor</i> H.-S.	<i>Lonicera japonica</i>	November, December

Insect and locality	C o l l e c t e d o n	Date and notes
<i>Azochis gripusalis</i> Walk. Paso Ancho		Throughout the year
<i>Brassolis isthmia</i> Bates Limon Waldeck	<i>Chrysalidocarpus lutescens</i> f <i>Cocos nucifera</i> F <i>Roystonea regia</i> f	April, September Very abundant and destructive along entire Atlantic seaboard
<i>Catopsilia philea</i> L. Paso Ancho San Pedro	<i>Cassia alata</i> f <i>Cassia reticulata</i> f	October, November, January
<i>Cocytius antaeus medor</i> Mer. San Isidro del General	<i>Annona cherimola</i> f <i>Annona muricata</i> f	February, May
<i>Copaxa nadari</i> Bouv. Paso Ancho	<i>Phoebe tonduzii</i> f	December
<i>Cydimon fulgens</i> (Walk.) San Pedro		July. Observed flying
<i>Danaus menippe</i> (Hbn.) San Pedro Torito	<i>Asclepias curassavica</i> f	July
<i>Dircenna klugii</i> (Geyer) Alajuelita	<i>Solanum torvum</i>	January, July
<i>Eantis pallida</i> (Feld.) Paso Ancho San Isidro de Coronado	<i>Buddleia davidi</i> <i>Citrus limetta</i> f	Throughout the year

Insect and locality	C o l l e c t e d o n		Date and notes
Erinnyis ello L. Santa Ana	Manihot esculenta	f	July
Eueides voracae Reak. San Pedro Santa Ana	Passiflora edulis Passiflora sp.	f f	June, July
Eurema eugenia Wall. Alajuelita			January
Eurema limoneus Feld. San Pedro	Cassia sp.		March
Gloveria balloui Schaus Paso Ancho	Psidium friedrichsthalianum Psidium molle	f f	April to September f
Halisidota underwoodi Rothsch.	Passiflora ligularis	f	November
Heliconius charitonia (L.) San Pedro	Passiflora quadrangularis		October
Hemerocampa costaricensis Schaus	Hicoria pecan		May, October
Hylesia alinda Druce Paso Ancho San Pedro	Coix lacryma-jobi Pelargonium zonale Persea americana	f f f	Psidium friedrichsthalianum f f f Psidium guajava f

Insect and locality	C o l l e c t e d o n	Date and notes
Hypanartia lethe (F.) San Pedro	Trema micrantha	January
Hyphyena colpodes (Wlsm.) San Josesito	f	Throughout the year
Jocara claudalis Mosch. San Isidro de Coronado	Persea pittieri	f
Laphygma frugiperda (S. & A.) San Isidro de Coronado	Holcus sorghum	January
Leucoptera coffeella (Guer. and Proutt.) Paso Ancho San Josesito		September
Lichnoptera cavillator Walk. Paso Ancho	Pyrus communis Ricinus communis	February, July
Lycorea atergatis (Doubt. and Hewits.) San Jose	Ficus carica	August
Melittia curcubitae Harr. San Pedro	Curcubita pepo	May
	Taetsia fruticosa	
	f	

Insect and locality	C o l l e c t e d o n	Date and notes
<i>Opisarius astur</i> Gram. San Pedro	<i>Hibiscus rosa-sinensis</i> f	January, February
<i>Opsiphanes corrosus</i> Stichel	<i>Musa sapientum</i> f	September
<i>Pachylia ficus</i> (L.) Paso Ancho San Jose	<i>Ficus</i> sp. <i>Ficus carica</i> f f	November, December
<i>Papilio archisiades</i> idaeus F. Paso Ancho		December
<i>Papilio polyxenes</i> stabilis R. and J.	<i>Daucus carota</i>	May
<i>Papilio thoas</i> autocles Rothsch. Paso Ancho Santa Ana	<i>Buddleia davidi</i> f <i>Citrus aurantifolia</i> f <i>Citrus limonia</i> f	July
<i>Phobetron hipparchia</i> Cran. Guadalupe	<i>Aristolochia rigens</i> f <i>Lucuma mammosa</i> f	June, September
<i>Pholus fasciatus</i> Drury Paso Ancho	<i>Jussiaea decurrens</i> f	June, July
<i>Pieris elodia</i> Bdv. San Isidro de Coronado San Pedro	<i>Brassica oleracea</i> botritis f <i>Brassica oleracea</i> capitata f <i>Cleome spinosa</i> f	January, April, October
<i>Plutella maculipennis</i> (Curt.) San Isidro de Coronado	<i>Brassica japonica</i> <i>Brassica oleracea</i> acephala <i>Brassica oleracea</i>	January, June, August

Insect and locality	C o l l e c t e d o n		Date and notes
Prolimacodes triangulifera Schaus San Pedro	Persea americana	f	June
Sibine ophelians Dyar? Guadalupe Paso Ancho	Ricinus communis Solanum wendlandi	f	June, November
Stenomma annonella Sepp. Paso Ancho	Annona cherimola	F	Entire crop of cherimola destroyed.
Stenomma sororia (Zell.)	Persea pittieri	f	Throughout the year
Telegonus alardus (Stoll) San Pedro	Erythrina rubrinervia	f	July to September
Thagana tibialis Walk. Limon	Terminalia catappa	f	September
Tolyte celeste Dyar San Pedro			April
Utetheisa ornatrix (L.)	Coriandrum sativum Crotalaria juncea	f f	January, February
	Eugenia jambos	f	
C R T H O P T E R A			
Aidemna azteca (Sauss.) Paso Ancho San Isidro del General San Pedro	Acnistus arborescens Dahlia rosea Ipomoea tiliacea Linum usitatissimum Lippia berlandieri Malacra radiata Passiflora ligularis	f f f f f	February, May, July to November
	Physalis lagascae Polygonum punctatum Radicula amoracia Scabiosa atropurpurea Viola sp. Zea mays	f f f f	

Insect and locality	C o l l e c t e d o n	Date and notes
Chorisonneura panamae Hebard Waldeck	Theobroma cacao	April
Coccothrips ravus Rehn ^{1/} San Isidro de Coronado	Brassica oleracea acephala f Canna indica f Cattleya dowiana f Cobaea scandens f Dahlia rosea f Hedychium coronarium f Iris laevigata F Lonicera japonica f Malacra radiata f Maranta arundinacea f	Mentha sativa f Passiflora quadrangularis f Persea americana f Roystonea regia f Tabernaemontana bignoni- aeflora f Tournefortia foetidissima f Trichopelia marginata f Viola odorata f Xanthosoma helleborii- folium f
Conocephalus cinereus Thunb. Alajuelita Santa Ana Waldeck	Acnistus arborescens f Artemisia absinthium f Coix lacryma-jobi f Coix mayuen f Crotalaria striata f Cucurbita pepo f Daucus carota f Hedychium coronarium f Hibiscus esculentus f Hibiscus sabbdariffa f	Holcus sorghum Inga roussoviaana Ipomoea purga Ixoporus unisetus f Lippia berlandieri Malacra radiata Melanthera aspera Panicum barbinode Pelargonium zonale Polygonum punctatum

^{1/} The oviposition slits in bark of trees noted in the Insect Pest Survey Bulletin, vol. 15, Supplement to no. 4, page 210, under C. ravus Rehn, were probably made by the tettioid Erioloides longipennis Redt. Two females and one male of C. ravus were kept in a tower cage with branches of coffee, avocado, and apple from the last nymphal instar until they died. Copulation took place November 3 and 7, the male died December 9, and the last female died in March. The soil was examined on March 5 and egg clusters were found just below the surface.

Insect and locality	C o l l e c t e d o n	Date and notes
Conocephalus cinereus--Cont'd.	Ricinus communis Solanum tuberosum Verbesina turbacensis Vernonia brachiata	Viola odorata f Vitis tiliaefolia Zea mays f
Ellipes minuta (Scudd.) Paso Ancho	Allium sativum Aleurites moluccana Artemisia absinthium Beta vulgaris cicla Brassica oleracea capitata Celosia argentea Citrus sinensis Cucurbita pepo	Cucumis sativus Cynara scolymus Gossypium barbadense Ipomoea batatas Iactuca sativa Petroselinum hortense Tragopogon porrifolius Triticum aestivum September
Epilampra abdomennigrum Deg. Paso Ancho San Pedro	Colocasia esculenta Musa paradisiaca	January, June
Erioloides longipennis Redt. San Pedro	Amygdalus persica Hicoria pecan	May. Damage by egg punctures
Eurycotis biolleyi Rehn San Pedro	Cobaea scandens Fuchsia sp.	June to August
Holocompsa azteca Sauss.	Erythrina rubrinervia	August
Insara intermedia (Brunner) San Isidro de Coronado Tarrazu	Acalypha wilkesiana Acnistus arborescens Artemisia absinthium Bauvardia humboldti Brassica japonica Byrsonima crassifolia Calathea zebrina Calyptanthus costaricensis	Chenopodium ambrosioides f Cleome spinosa Cobaea scandens Conostegia lanceolata Cosmos sulphureus Crotalaria fulva Croton gossypifolium Dahlia rosea Datura candida Throughout the year

Insect and locality	C o l l e c t e d o n	Date and notes
Insara intermedia--Cont'd.	<p>Desmodium spp. Dianthus caryophyllus f Diospyros kaki f Erythrina rubrinervia f Fragaria chiloensis Garcinia tinctoria Hamelia erecta Impatiens balsamina f Indigofera suffruticosa Ipomoea purga Ipomoea tiliacea f Iresine herbsti f Iris laevigata f Jacobinia coccinea Jussiaea decurrens Lactuca sativa Lippia berlandieri Loniceria japonica</p>	<p>Lycopersicum esculentum f Malacra radiata f Mentha sativa f Mirabilis jalapa f Nicotiana tabacum f Pelargonium graveolens Persea americana Phoenix canariensis Polygonum punctatum f Randia mitis f Rosmarinus officinalis f Salvia splendens f Sapium caudatum f Sida rhombifolia f Tagetes patula f Thuja orientalis f Viola odorata f Zinnia elegans f</p>
Latiblattella sp. Waldeck	Theobroma cacao	July
Microcentrum ephippium Burm. San Pedro	Amaranthus spinosus	November
Neoxabea bipunctata (Deg.) Paso Ancho Tarrazu	<p>Alnus acuminata Bunchosia costaricensis Coffea arabica Indigofera suffruticosa Malus sylvestris</p>	<p>Musa cavendishi Pelargonium zonale Tournefortia foetidissima Vernonia brachiata</p>
Orphulella punctata (Deg.) San Pedro	Solanum tuberosum Grass	January

Insect and locality	C o l l e c t e d o n	Date and notes
Panchlora cubensis Sauss. Paso Ancho	Guilielma utilis	June, August Household pest
Paratettix mexicana abortus Hancock Alajuelita San Rafael de Coronado Santa Ana	Bidens pilosa Cucurbita pepo Dianthus caryophyllus Fragaria chiloensis Jussiaea decurrens Rubus spp. (Blackberry)	Throughout the year
Paroecanthus mexicanus Sauss.? Paso Ancho	Zantedeschia aethiopica	October. In flower
Pycnopalpa bicordata (Serv.) Tarrazu	Coffea arabica	September
Rhipipteryx biolleyi Sauss. Paso Ancho San Isidro de Coronado	Althaea rosea Elighia sapida Byrsonima crassifolia Canarium odoratum Celosia cristata Chrysophyllum cainito Cirsium costaricensis Codiaeum variegatum Coffea arabica Conostegia lanceolata Dianthus caryophyllus Dillenia indica	Throughout the year
Rhipipteryx tricolor Sauss. Juan Vinas Orosi	Asclepias curassavica Grass	February, November
Schistocerca impleta Walk. San Isidro de Coronado San Isidro del General Rancho Redondo	Althaea rosea Annona reticulata Aristolochia rigens Artocarpus communis f	Throughout the year
	Baccharis nervosa f Brassica oleracea capitata Callistephus chinensis Ceiba pentandra	
	Trifolium fragiferum Triticum aestivum Vinca rosea Viola odorata Viola tricolor Eugenia malaccensis Grass Grevillea robusta Lactuca sativa Phaseolus vulgaris Phoenix canariensis Poinciana regia Ruta graveolens Tabebuia guayacana Tragopogon porrifolius Triticum aestivum Veronia brachiata	

Insect and locality	C o l l e c t e d o n			Date and notes
Taeniopoda centurio (Drury) Limon Santa Ana Waldeck	Carludovica palmata Citrus aurantifolia Codiaeum variegatum Nephrolepis sp.	f f f f	Panicum maximum Saccharum officinarum	April, May, July, September
Taeniopoda varipennis Rehn Santa Ana	Canna indica Dolichos lablab Hemerocallis fulva	f f f	Hibiscus esculentus Panicum maximum Pelargonium zonale	November

D I P T E R A

Achaetoneura rileyi Will. San Pedro		May. Parasite of Dicentria violascens H.-S.
Anastrepha ludens (Loew) San Jose	Casiniroa edulis F	April, July. Reared in fruit.

Insect and locality	Collected on	Date and notes
Calaminettia geminata (F.) Waldeck	Theobroma cacao	July
Camptoprosopella xanthoptera Hendel	Triticum aestivum	April, July, December. Reared in fruit.
Carpolonchaea pendula Bezzi	Manihot glaziovii f	February, August
Dermatobia hominis (L.) Santa Ana	Dog	July
Desmometopa m-nigrum Zett. San Pedro		February
Dichelacera marginata Macq. San Isidro del General	Horse	February
Dilophus melanarius V. de Wulp Paso Ancho San Isidro de Coronado	Myosotis sylvatica f Creopanax sp. f Pennisetum purpureum	April, August f
Eusimulium callidum D. and S. Paso Ancho	Man Calf	August, September, October Abundant on calf
Eusimulium metallicum (Bell.) La Carpintera Paso Ancho	Man Calf	January, October
Eusimulium quadrivittatum (Loew) Paso Ancho	Man	April
Eutreta sparsa (Wied.) Paso Ancho San Pedro	Citharexylum caudatum	January, October. Maggots in galls
	Hibiscus sabdariffa	

Insect and locality	C o l l e c t e d o n	Date and notes
Euxesta sororcula Wied. San Pedro	Zea mays	October (Adult only)
Euxesta stigmatias Loew San Isidro del General San Pedro	Zea mays	March, June, September
Rhynchosciara brevicornis Rubs.? La Carpintera Paso Ancho	Impatiens balsamina Indigofera suffruticosa Trichilia havanensis Vernonia brachiata	
Stomoxys calcitrans (L). San Pedro		August, September
Stratiomyia subalba Bellardi Paso Ancho	Inga roussoviana	October
Tetraeuaresta obscuriventris (Loew) Cartago Paso Ancho	Anaranthus spinosus Calea urticifolia axillaris Calyptranthes costaricensis Hibiscus rosa-sinensis Ixora chinensis	February to July
Toxotrypana curvicauda Gerst. Atenas San Pedro	Gonolobus edulis f	August. Reared in fruit. September
Volucella purpurifera Bigot Paso Ancho	Philadelphus trichapetalus	September. Eating pollen from P. trichapetalus.
Volucella tricineta Bigot Paso Ancho	Philadelphus trichapetalus f	September. Eats pollen.

Insect and locality	: Collected on	: Date and notes
H Y M E N O P T E R A		
Atta sexdens (L.) Alajuela Heredia Limon Turrialba		January, February, May, August. General feeder. Injurious and very abundant.
Bombus ephippiatus Say Rancho Redondo	Trifolium pratense	March. Feeds in flower.
Bombus mexicanus Cress. San Pedro	Colinus v. Leonurus sibericus	July, August. Feeds in flower.
Gymnopolybia sulfureofasciata Ducke Paso Ancho Sofia ? Waldeck	Acnistus arborescens Boehmeria nivea Canarium odoratum Cestrum lanatum Cirsium costaricensis Congea velutina	Throughout the year. Taking tomentum from leaves.
Megachile zapoteka Cress. San Pedro	Rose	April. Serious injury to a few plants by cutting the leaves.
	Dombeya wallichii Grevillea banksi Grevillea robusta Persea pittieri Theobroma cacao Hedychium coronarium	f

Insect and locality	C o l l e c t e d o n	Date and notes
Odontomachus haematoda (L.) San Pedro	Persea americana	October
Polybia fasciata Sauss. Paso Ancho	Cleome spinosa	April. Eating Pieris elodia Bdv.
Solenopsis geminata (F.) San Isidro del General Santa Ana Tarrazu Turrialba	Ananas sativus f Casimiroa edulis f Cassia alata f Citrus limetta f Citrus paradisi f	Ixora chinensis f Rheedia sp. f Terminalia catappa f Vigna sesquipedalis f Zantedeschia aethiopica f
Tatua tatua (Cuvier) Paso Ancho	Dovyalis hebecarpa f Impatiens balsamina	August
Trigona amalthea (Oliv.) Santa Barbara de Heredia	Zea mays	August taking pollen.
Trigona cupira Smith Paso Ancho	Bocconia frutescens Calonyction aculeatum Coriandrum sativum	June, August, October. Feeds in flower.
Trigona ruficrus corvina Cr. Waldeck San Isidro del General	Theobroma cacao f	April. Eats leaves and pods of cacao
Trigona silvestriana Vachal Orosi Ujarras Waldeck	Cassia sp. near alata f Citrus paradisi f Citrus sinensis f Eucharis sp. f	February, July, November. Scallops the leaves and eats flowers.
Trioxylon rugifrons Cameron Paso Ancho	Conostegia lanceolata	April
Xylocopa frontalis (Oliv.) San Isidro del General	Gliricidia maculata f	February; abundant at flowers

Insect and locality	Collected on	Date and notes
THYSANOPTERA		
Liothrips zeteki Hood	Phoebe tonduzii	September
Thrips tabaci Lind. San Isidro de Coronado San Pedro	Allium cepa f	January to June; October, November. Injurious
ISOPTERA		
Kaloterms holmgreni (Banks) Paso Ancho San Pedro		March to July. Attacked principal building of Escuela Nacional de Agri- cultura.
Nesutitermes costalis (Holmg.)	Elaeis guineensis	
DERMAPTERA		
Doru lineare (Esch.) San Isidro del General San Pedro Santa Ana	Bixa orellana Grass Mentha sativa f	February, July, August
Metrosura ruficeps (Burm.) Guadalupe	Musa paradisiaca	

Insect and locality	Collected on	Date and notes
<i>Psalis americana</i> (Beauv.) Guadalupe	<i>Musa paradisiaca</i>	January
MALLOPHAGA		
<i>Bovicola caprae</i> Gult San Pedro	Goat	February, August. A common pest of goat.
<i>Goniodes dissimilis</i> Nitz. San Pedro	Chicken	May
<i>Goniodes meleagridis</i> L. San Pedro	Turkey	December
CORRODENTIA		
<i>Nesacus flavatus</i> Navas Guadalupe La Carpintera San Isidro de Coronado	<i>Citrus sinensis</i> <i>Coffea arabica</i> <i>Persea americana</i> <i>Piper auritum</i>	February, May, December
SIPHONAPTERA		
<i>Xenopsylla cheopis</i> (Rothsch.) San Pedro	Rat	June

Insect and locality	C o l l e c t e d o n	Date and notes
	A R A C H N I D A	
<p>Anychnus clarki McG. San Pedro</p> <p>Tetranychus telarius (L.) (Epitetranynchus althaea von H.) San Pedro</p>	<p>Chrysophyllum cainito f</p> <p>Citrus aurantium f</p> <p>Coffea arabica</p>	<p>January, March April. Checks growth and prevents budding of young stock.</p> <p>March</p>